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(FILE 'HOME' ENTERED AT 08:05:56 ON 24 NOV 2009)

FILE 'LREGISTRY' ENTERED AT 08:06:34 ON 24 NOV 2009

FILE 'REGISTRY' ENTERED AT 08:08:06 ON 24 NOV 2009  
ACT HOD829E/A

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L1 SCR 2040  
L2 STR  
L3 STR  
L4 1207 SEA SSS FUL L3 AND L2 AND L1  
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FILE 'LREGISTRY' ENTERED AT 08:09:02 ON 24 NOV 2009

L5 STR L2  
L6 STR L3

FILE 'REGISTRY' ENTERED AT 08:14:22 ON 24 NOV 2009  
L7 50 SEA SUB=L4 SSS SAM L5 AND L6

FILE 'LREGISTRY' ENTERED AT 08:14:51 ON 24 NOV 2009  
L8 STR L5

FILE 'REGISTRY' ENTERED AT 08:18:48 ON 24 NOV 2009  
L9 3 SEA SUB=L4 SSS SAM L8 AND L6  
D SCA  
L10 59 SEA SUB=L4 SSS FUL L8 AND L6

FILE 'HCAPLUS' ENTERED AT 08:19:43 ON 24 NOV 2009  
L11 30 SEA SPE=ON ABB=ON PLU=ON L10

FILE 'REGISTRY' ENTERED AT 08:21:36 ON 24 NOV 2009  
L12 50 SEA SUB=L4 SSS SAM L5 AND L6  
L13 1200 SEA SUB=L4 SSS FUL L5 AND L6

FILE 'HCAPLUS' ENTERED AT 08:22:02 ON 24 NOV 2009  
L14 1116 SEA SPE=ON ABB=ON PLU=ON L13

FILE 'ZCPLUS' ENTERED AT 08:22:11 ON 24 NOV 2009  
L15 QUE SPE=ON ABB=ON PLU=ON ELECTROLYT?

FILE 'HCAPLUS' ENTERED AT 08:22:32 ON 24 NOV 2009

L16 0 SEA SPE=ON ABB=ON PLU=ON L14 (L) L15

FILE 'ZCPLUS' ENTERED AT 08:23:20 ON 24 NOV 2009  
L17 QUE SPE=ON ABB=ON PLU=ON BATTERY# OR BATTERIES#

FILE 'HCPLUS' ENTERED AT 08:23:32 ON 24 NOV 2009  
L18 0 SEA SPE=ON ABB=ON PLU=ON L14 (L) L17  
L19 8 SEA SPE=ON ABB=ON PLU=ON L14 AND L15  
L20 0 SEA SPE=ON ABB=ON PLU=ON L14 AND L17

FILE 'ZCPLUS' ENTERED AT 08:25:05 ON 24 NOV 2009

FILE HOME

FILE LREGISTRY  
LREGISTRY IS A STATIC LEARNING FILE

CAS INFORMATION USE POLICIES, ENTER HELP USAGETERMS FOR DETAILS.

FILE REGISTRY  
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 NOV 2009 HIGHEST RN 1193309-59-9  
DICTIONARY FILE UPDATES: 22 NOV 2009 HIGHEST RN 1193309-59-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

FILE HCPLUS

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FILE COVERS 1907 - 24 Nov 2009 VOL 151 ISS 22

FILE LAST UPDATED: 22 Nov 2009 (20091122/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

HCAplus now includes complete International Patent Classification (I reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

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FILE ZCAPLUS

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FILE COVERS 1907 - 24 Nov 2009 VOL 151 ISS 22

FILE LAST UPDATED: 22 Nov 2009 (20091122/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

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CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

During November, try the new LSUS format of legal status information in the CA/CAplus family databases for free! Complete details on the number of free displays and other databases participating in this offer appear in NEWS 10.

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L1           SCR 2040
L2           STR
1 A -
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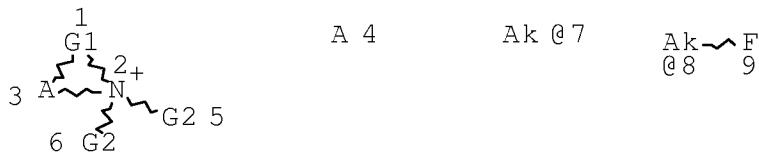
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DEFAULT ECLEVEL IS LIMITED
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NUMBER OF NODES IS     1
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#### STEREO ATTRIBUTES: NONE

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L3           STR
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REP G1=(2-3) A
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VAR G2=7/8
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#### NODE ATTRIBUTES:

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CHARGE IS *+      AT    2
NSPEC  IS R       AT    4
CONNECT IS E1    RC AT    7
DEFAULT MLEVEL IS ATOM
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GGCAT IS LOC AT 7  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 9

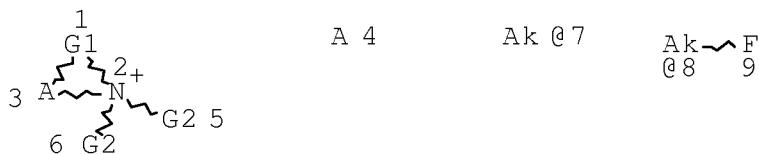
STEREO ATTRIBUTES: NONE  
 L4 1207 SEA FILE=REGISTRY SSS FUL L3 AND L2 AND L1

=> d que stat 110  
 L1 SCR 2040  
 L2 STR  
 1 A -

NODE ATTRIBUTES:  
 CHARGE IS \*- AT 1  
 NSPEC IS RC AT 1  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

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STEREO ATTRIBUTES: NONE  
 L3 STR

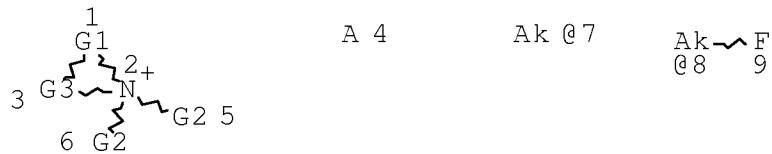


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 VAR G2=7/8  
 NODE ATTRIBUTES:  
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 NSPEC IS R AT 4  
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 DEFAULT MLEVEL IS ATOM

GGCAT IS LOC AT 7  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE  
 L4 1207 SEA FILE=REGISTRY SSS FUL L3 AND L2 AND L1  
 L6 STR



REP G1=(2-3) A  
 VAR G2=7/8  
 VAR G3=C/O/P/S/N  
 NODE ATTRIBUTES:  
 CHARGE IS \*+ AT 2  
 NSPEC IS R AT 4  
 CONNECT IS E1 RC AT 7  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS LOC AT 7  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE  
 L8 STR

G1 4



VAR G1=2/1

## NODE ATTRIBUTES:

CHARGE IS \*- AT 1

CHARGE IS \*- AT 3

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 4

## STEREO ATTRIBUTES: NONE

L10 59 SEA FILE=REGISTRY SUB=L4 SSS FUL L8 AND L6

100.0% PROCESSED 161 ITERATIONS

SEARCH TIME: 00.00.01 59 ANSWERS

=> d 111 1-30 bib abs hitstr hitind  
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L11 ANSWER 1 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:46803 HCAPLUS Full-text

DN 144:135233

TI Pharmaceuticals for inhalation comprising PDE IV inhibitors and glycopyrrolate salts

PA Boehringer Ingelheim Pharma Gm.b.H. &amp; Co. K.-G., Germany

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI EP 1616567 A1 20060118 EP 2004-16878

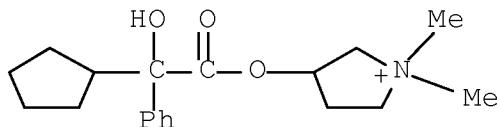
200407  
16R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
PL, SK, HR

CA 2570433 A1 20060126 CA 2005-2570433

200506

13

WO 2006008213	A1	20060126	WO 2005-EP52704	200506 13
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
EP 1799205	A1	20070627	EP 2005-752830	200506 13
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
JP 2008506664	T	20080306	JP 2007-520795	200506 13
US 20080292562	A1	20081127	US 2008-572199	200807 29
PRAI EP 2004-16878	A	20040716		
WO 2005-EP52704	W	20050613		
AB	The present invention relates to novel pharmaceutical compns. based on PDE IV inhibitors and salts of glycopyrrolate salts, processes for preparing them and their use in the treatment of respiratory complaints. Thus, a formulation contained a glycopyrrolate salt 60, AWD 12281 200, lactose 12240 µg/capsule.			
IT 873295-30-8	RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceuticals for inhalation comprising PDE IV inhibitors and glycopyrrolate salts)			
RN 873295-30-8 HCPLUS				
CN Pyrrolidinium, 3-[(2-cyclopentyl-2-hydroxy-2-phenylacetyl)oxy]-1,1-dimethyl-, fluoride (1:1) (CA INDEX NAME)				



● F -

CC 63-6 (Pharmaceuticals)

IT 56-81-5, Glycerol, biological studies 57-55-6, 1,2-Propanediol, biological studies 58-55-9, Theophylline, biological studies 60-00-4, biological studies 64-02-8, Sodium Eddate 64-17-5, Ethanol, biological studies 67-63-0, 2-Propanol, biological studies 596-51-0 25322-68-3 25322-68-3D, Polyethylene glycol, esters with fatty acids 25322-69-4 41078-02-8 135637-46-6 136145-07-8, Arofylline 146426-61-1 153259-65-5, Cilomilast 153587-17-8 154284-39-6 155043-84-8 161918-68-9 162278-09-3 162401-32-3, Roflumilast 162542-90-7 179024-48-7, PD 168787 182282-60-6 185954-27-2 185954-42-1 186461-26-7, T 2585 190377-71-0, NCS 613 192819-27-5 201932-04-9D, salts 202185-74-8D, salts 207993-12-2, BY 343 257892-34-5 292135-78-5 329306-27-6 444659-35-2, YM 58997 444659-43-2 475468-09-8 478409-36-8, CP 325366 586388-32-1 746600-85-1D, salts 754152-54-0D, salts 835882-98-9 835882-99-0 836652-75-6, C 1-1018 836652-82-5, CDC 3052 836652-83-6, Z 15370 873295-30-8 873295-31-9 873295-32-0 873295-33-1 873295-34-2 873295-35-3 873295-36-4 873295-37-5 873295-38-6 873295-39-7 873295-40-0 873295-41-1 873295-43-3 873295-44-4 873295-45-5 873295-46-6  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(pharmaceuticals for inhalation comprising PDE IV inhibitors and glycopyrrolate salts)

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:697566 HCAPLUS [Full-text](#)

DN 144:78349

TI Crystal structure of (3S,1'S)-2,2-dimethyl-3-[1,2-cyclohexylidenedioxymethyl]tetrahydro-1,2-oxazolium tetrafluoroborate, (C<sub>13</sub>H<sub>24</sub>N<sub>0</sub>3) [BF<sub>4</sub>]

AU Frey, W.; Henneboehle, M.; Jaeger, V.

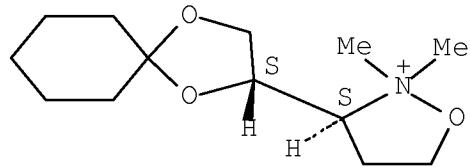
CS Institut fuer Organische Chemie, Universitaet Stuttgart, Stuttgart,  
 70569, Germany  
 SO Zeitschrift fuer Kristallographie - New Crystal Structures (2005),  
 220(2), 149-150  
 CODEN: ZKNSFT; ISSN: 1433-7266  
 PB Oldenbourg Wissenschaftsverlag GmbH  
 DT Journal  
 LA English  
 AB The title compound is orthorhombic, space group C2221, with a  
 9.320(2), b 10.6761(8), c 33.786(2) Å; Z = 8. Atomic coordinates are  
 given. The isoxazolidine ring system shows an envelope conformation.  
 Three atoms (C10, C11, C12) of the cyclohexylidene moiety exhibit  
 very large displacement parameters.  
 IT 773091-89-7, (3S,1'S)-2,2-Dimethyl-3-[1,2-  
 cyclohexylidenedioxoethyl]tetrahydro-1,2-oxazolium tetrafluoroborate  
 RL: PRP (Properties)  
     (crystal structure of)  
 RN 773091-89-7 HCAPLUS  
 CN Isoxazolidinium, 3-(2S)-1,4-dioxaspiro[4.5]dec-2-yl-2,2-dimethyl-,  
 (3S)-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 773091-88-6

CMF C13 H24 N O3

Absolute stereochemistry.

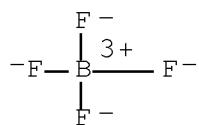


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 75-8 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 28

IT 773091-89-7, (3S,1'S)-2,2-Dimethyl-3-[1,2-cyclohexylidenedioxyethyl]tetrahydro-1,2-oxazolium tetrafluoroborate  
 RL: PRP (Properties)  
 (crystal structure of)

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2005:356821 HCAPLUS Full-text  
 DN 144:6402

TI Kinetic study of the 5-exo cyclization of  $\alpha$ -ammonium distonic radical cation,  $\alpha$ -[N-(3-methyl-3-butenyl), N,N-(dimethyl)] ammoniomethyl

AU Luz, Amalia Rios V.; Luz, Marina Jaramillo G.; Jaime, Martin F.  
 CS Departamento de Quimica, Facultad de Ciencias Exactas y Naturales, Universidad de Caldas, Manizales, Colombia  
 SO Revista Colombiana de Quimica (2004), 33(1), 21-31  
 CODEN: RCLQAY; ISSN: 0120-2804  
 PB Universidad Nacional de Colombia, Departamento de Quimica  
 DT Journal  
 LA Spanish  
 OS CASREACT 144:6402

AB Cyclization of the  $\alpha$ -ammonio distonic radical cation analogous to a 5-hexenyl system with Me substituent at 5 position and generated from  $\alpha$ -[N-(3-methyl-3-butenyl), N,N-(dimethyl)] ammoniomethyl iodide via radical conditions, was studied by the unimol. vs. bimol. competition experiment. Thus, under pseudo first order conditions, using nBu3SnH as reducing agent and photolytic initiation, the cyclization constant was determined as  $k_c = 2.9 + 107$ , which means that the rate is very fast and the cyclization highly regioselective for the formation of pyrrolidinic ring systems substituted at 3 position, with recognized synthetic potential.

IT 183849-69-6  
 RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)

(kinetic study of 5-exo cyclization of  $\alpha$ -ammonium distonic radical cation,  $\alpha$ -[N-(3-methyl-3-butenyl), N,N-(dimethyl)] ammoniomethyl)

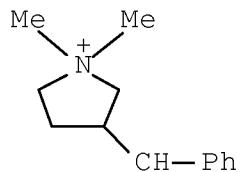
RN 183849-69-6 HCAPLUS

CN Methyl, (1,1-dimethylpyrrolidinium-3-yl)phenyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 183849-68-5

CMF C13 H19 N

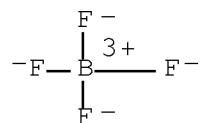


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 22-8 (Physical Organic Chemistry)

Section cross-reference(s): 74

IT 183849-69-6

RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)

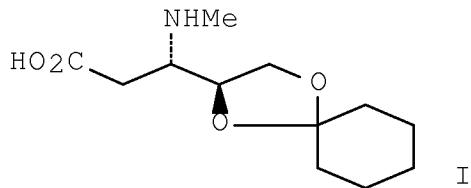
(kinetic study of 5-exo cyclization of  $\alpha$ -ammonium distonic radical cation,  $\alpha$ -[N-(3-methyl-3-butenyl), N,N-(dimethyl)] ammoniomethyl)

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1)

## CITINGS)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2004:392835 HCAPLUS Full-text  
 DN 141:332422  
 TI Synthesis of isoxazolines. 25. Isoxazolinium salts in asymmetric synthesis. 1. Stereoselective reduction induced by a 3'-alkoxy stereocenter. A new approach to polyfunctionalized  $\beta$ -amino acids  
 AU Henneboehle, Macro; Le Roy, Pierre-Yves; Hein, Matthias; Ehrler, Rudolf; Jaeger, Volker  
 CS Institut fuer Organische Chemie, Universitaet Stuttgart, Stuttgart, D-70569, Germany  
 SO Zeitschrift fuer Naturforschung, B: Chemical Sciences (2004), 59(4), 451-467  
 CODEN: ZNBSFN; ISSN: 0932-0776  
 PB Verlag der Zeitschrift fuer Naturforschung  
 DT Journal  
 LA English  
 OS CASREACT 141:332422  
 GI



AB A new approach to optically active N-methylamino acids was presented, relying on stereoselective reduction of N-methylisoxazolinium salts with a dioxyethyl side-chain. The diastereoselectivity of the reduction step was studied systematically, in comparison with that of resp. isoxazolines. A two-step transformation of isoxazolinium salts - with NaBH3(OAc) and subsequent catalytic hydrogenation as well as a one-pot reduction by catalytic hydrogenation led to high (95:5 and 87:13) diastereomeric ratios of protected erythro-N-methylaminopentanetriols. The hydroxyethyl side-chain was elaborated by oxidation to afford the  $\beta$ -N-methylamino acid I, exemplifying the potential of this strategy.

IT 773091-89-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (asym. synthesis of N-methyl- $\beta$ -amino acids and aminotriols  
 via stereoselective reduction and stereoselective catalytic  
 hydrogenation of N-methylisoxazolinium salts)

RN 773091-89-7 HCPLUS

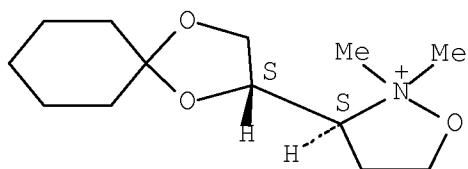
CN Isoxazolidinium, 3-(2S)-1,4-dioxaspiro[4.5]dec-2-yl-2,2-dimethyl-,  
 (3S)-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 773091-88-6

CMF C13 H24 N O3

Absolute stereochemistry.

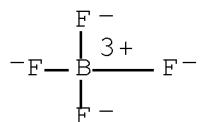


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 34-2 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 28, 33

IT	110045-70-0P	771479-13-1P	771479-14-2P	771479-15-3P
	771479-16-4P	771479-19-7P	771479-21-1P	771479-22-2P
	771479-23-3P	771479-24-4P	771479-29-9P	771479-35-7P
	773091-83-1P	773091-85-3P	773091-89-7P	

RL: SPN (Synthetic preparation); PREP (Preparation)

(asym. synthesis of N-methyl- $\beta$ -amino acids and aminotriols via stereoselective reduction and stereoselective catalytic hydrogenation of N-methylisoxazolinium salts)

RE.CNT 128 THERE ARE 128 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:404002 HCAPLUS Full-text

DN 139:116999

TI New Insights in the Mechanism of Amine Catalyzed Epoxidation: Dual Role of Protonated Ammonium Salts as Both Phase Transfer Catalysts and Activators of Oxone

AU Aggarwal, Varinder K.; Lopin, Chrystel; Sandrinelli, Franck

CS School of Chemistry, University of Bristol, Bristol, BS8 1TS, UK

SO Journal of the American Chemical Society (2003), 125(25), 7596-7601  
CODEN: JACSAT; ISSN: 0002-7863

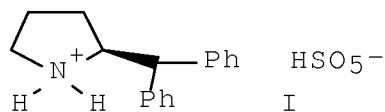
PB American Chemical Society

DT Journal

LA English

OS CASREACT 139:116999

GI



AB Amines were previously reported to catalyze the epoxidn. of alkenes using Oxone (2KHSO5+KHSO4+K2SO4), and significant levels of asym. induction were observed. From screening amines based on 2-substituted pyrrolidines, it has now been found that more consistent and reproducible results are achieved with the HCl salt of the amine compared to the amine itself. Up to 66% ee was achieved in epoxidn. of 1-phenylcyclohexene. The chiral amine could be reisolated in >90% yield when reactions were conducted at -10°, indicating that the integrity of the amine was maintained during the oxidation process. At -10°, (S)-2-(diphenylmethyl)pyrrolidine 1 reacted with Oxone to give a mixture of ammonium salts containing the peroxyomonosulfate salt I. The enantioselectivity obtained with this salt was compared to the amine-HCl salt catalyzed process and identical results were observed, indicating that the true oxidant was the peroxyomonosulfate

salt I. The relative rates of oxidation of cis- and trans- $\beta$ -methylstyrenes together with the  $\rho$  value of 1-arylhexenes were determined. The amine catalyzed process involved electrophilic oxidation. A new mechanism is advanced in which the protonated amine not only acts as a PTC but also activates Oxone, through H bonding, toward electrophilic attack.

IT 562813-65-4P

RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(nonstereoselective low yield 1-phenylcyclohexene epoxidn. by; dual role of protonated ammonium salts as both phase transfer catalysts and activators of oxone in mechanism of amine catalyzed epoxidn.)

RN 562813-65-4 HCPLUS

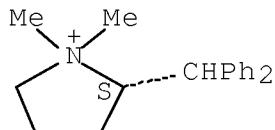
CN Pyrrolidinium, 2-(diphenylmethyl)-1,1-dimethyl-, (2S)-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 562813-64-3

CMF C19 H24 N

Absolute stereochemistry. Rotation (+).

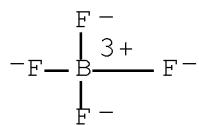


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 22-3 (Physical Organic Chemistry)  
 IT 562813-65-4P

RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(nonstereoselective low yield 1-phenylcyclohexene epoxidn. by; dual role of protonated ammonium salts as both phase transfer catalysts and activators of oxone in mechanism of amine catalyzed epoxidn.)

OSC.G 40 THERE ARE 40 CAPLUS RECORDS THAT CITE THIS RECORD (42 CITINGS)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2002:889558 HCAPLUS Full-text

DN 137:369966

TI Preparation of enantiomerically pure basic [(cyclopentyl- or cyclohexylhydroxyphenylacetyl)oxy]-1,1-dimethylpyrrolidinium salts, their muscarinic receptor binding affinity, and use as treatment for obstructive respiratory disease

IN Noe, Christian; Mutschler, Ernst; Lambrecht, Gunter; Elgert, Michael; Elgert, Ruth Irene; Czeche, Sittah; Waelbroeck, Magali

PA Germany

SO U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. 6,307,060.  
 CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

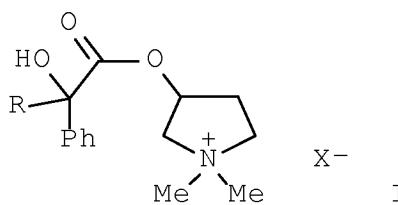
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
	-----				
PI	US 20020173536	A1	20021121	US 2001-901217	200107 09
US	6613795	B2	20030902		
WO	9821183	A1	19980522	WO 1997-AT245	199711 11
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,				

TT, UA, UG, US, UZ, VN, YU, ZW  
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,  
 FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,  
 CM, GA, GN, ML, MR, NE, SN, TD, TG  
 EP 1369414 A1 20031210 EP 2003-5233 199711  
 11  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO, AL  
 EP 1371645 A1 20031217 EP 2003-5232 199711  
 11  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO, AL  
 US 6307060 B1 20011023 US 1999-309960 199905  
 11  
 US 20030220400 A1 20031127 US 2003-601542 200306  
 23

PRAI US 7253182 B2 20070807  
 AT 1996-1973 A 19961111  
 WO 1997-AT245 W 19971111  
 US 1999-309960 A2 19990511  
 EP 1997-911049 A3 19971111  
 US 2001-901217 A3 20010709

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OS MARPAT 137:369966

GI



AB Disclosed are enantiomerically pure cyclic aminoalc. esters of arylcycloalkylhydroxycarboxylic acids with at least 90% enantiomeric excess of the (3R,2'R), (3S,2'R), (3R,2'S), or (3S,2'S) configured

enantiomer. Thus, [(cyclopentyl (or cyclohexyl) hydroxyphenylacetyl)oxy] pyrrolidinium salts I (R = cyclopentyl, cyclohexyl, X = bromide, iodide, fluoride, chloride) were prepared by reacting (3R) or (3S)-1-methyl-3-pyrrolidinol with the corresponding phenylacetate, followed by preparation of the tartrate intermediates and quaternization. Inhalable powder and aerosol formulations of the compds. were also prepared. The muscarinic binding affinity of I were examined using rabbit vas deferens, guinea pig atrium, guinea pig ileum, and human M1, M2, and M3 receptors.

IT 475468-10-1P 475468-11-2P  
475468-17-8P 475468-23-6P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

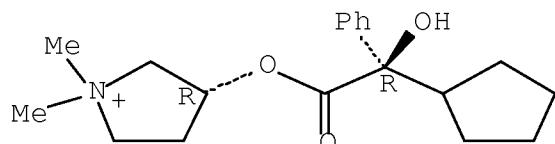
(preparation and muscarinic receptor binding affinity of  
[(cyclopentyl

or cyclohexylhydroxyphenylacetyl)oxy]pyrrolidinium halides and  
inhalable and aerosol formulation preps. for treating  
obstructive respiratory diseases)

RN 475468-10-1 HCPLUS

CN Pyrrolidinium, 3-[[2R)-2-cyclopentyl-2-hydroxy-2-phenylacetyl]oxy]-  
1,1-dimethyl-, fluoride (1:1), (3R)- (CA INDEX NAME)

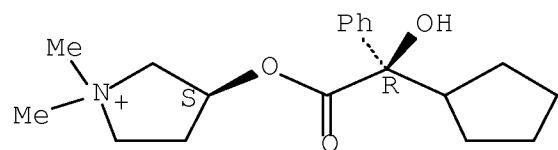
Absolute stereochemistry.



RN 475468-11-2 HCPLUS

CN Pyrrolidinium, 3-[[2R)-2-cyclopentyl-2-hydroxy-2-phenylacetyl]oxy]-  
1,1-dimethyl-, fluoride (1:1), (3S)- (CA INDEX NAME)

Absolute stereochemistry.

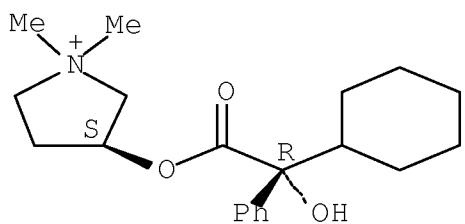


● F -

RN 475468-17-8 HCAPLUS

CN Pyrrolidinium, 3-[(2R)-2-cyclohexyl-2-hydroxy-2-phenylacetyl]oxy]-1,1-dimethyl-, fluoride (1:1), (3S)- (CA INDEX NAME)

Absolute stereochemistry.

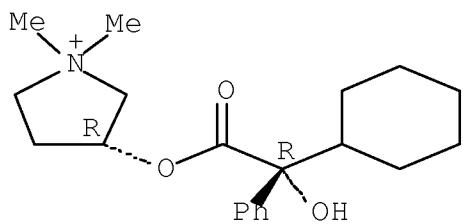


● F -

RN 475468-23-6 HCAPLUS

CN Pyrrolidinium, 3-[(2R)-2-cyclohexyl-2-hydroxy-2-phenylacetyl]oxy]-1,1-dimethyl-, fluoride (1:1), (3R)- (CA INDEX NAME)

Absolute stereochemistry.



● F -

IC ICM A61K031-4015

ICS C07D207-46

INCL 514424000; X54-854.2

CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): 63

IT	129784-11-8P	129784-12-9P	129784-14-1P	201667-20-1P
	207856-74-4P	207856-75-5P	207856-76-6P	207856-77-7P
	207856-78-8P	207856-79-9P	207856-80-2P	207856-81-3P
	475468-09-8P	<b>475468-10-1P</b>	<b>475468-11-2P</b>	
	475468-13-4P	475468-15-6P	<b>475468-17-8P</b>	475468-19-0P
	475468-21-4P	<b>475468-23-6P</b>	475468-25-8P	

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and muscarinic receptor binding affinity of

[(cyclopentyl

or cyclohexylhydroxyphenylacetyl)oxy]pyrrolidinium halides and  
inhalable and aerosol formulation preps. for treating  
obstructive respiratory diseases)

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L11 ANSWER 7 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:174677 HCAPLUS Full-text

DN 134:366563

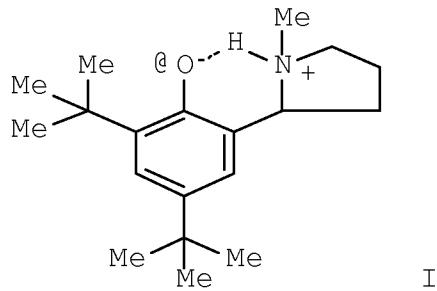
TI Construction of Persistent Phenoxy Radical with Intramolecular Hydrogen Bonding

AU Maki, Toshihide; Araki, Yoko; Ishida, Yukihiro; Onomura, Osamu;  
Matsumura, Yoshihiro

CS Faculty of Pharmaceutical Sciences, Nagasaki University, Nagasaki,  
852-8521, Japan

SO Journal of the American Chemical Society (2001), 123(14), 3371-3372  
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society  
 DT Journal  
 LA English  
 OS CASREACT 134:366563  
 GI



AB The authors characterized phenoxy radical cation I as a proper model for H-bonded phenoxy radicals in biol. systems. In this model, an intramol. proton migration occurs at its redox process with the min. nuclear motion requirement. Probably some basic functional group located near the tyrosine residue in an active site of enzyme may control the redox potential of the tyrosyl radical with H bonding.

IT 340228-55-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthetic precursor of 2-aminomethyl-4,6-tert-butylphenol analog; construction of persistent phenoxy radical with intramol. hydrogen bonding)

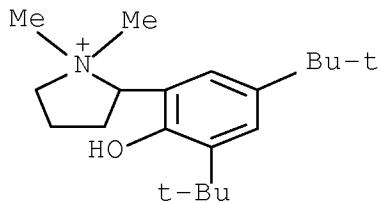
RN 340228-55-9 HCPLUS

CN Pyrrolidinium, 2-[3,5-bis(1,1-dimethylethyl)-2-hydroxyphenyl]-1,1-dimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 340228-54-8

CMF C20 H34 N O

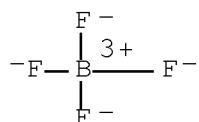


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 22-12 (Physical Organic Chemistry)

Section cross-reference(s): 7, 34, 72

IT 340228-55-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthetic precursor of 2-aminomethyl-4,6-tert-butylphenol analog; construction of persistent phenoxy radical with intramol. hydrogen bonding)

OSC.G 44 THERE ARE 44 CAPLUS RECORDS THAT CITE THIS RECORD (47 CITINGS)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 30 HCPLUS COPYRIGHT 2009 ACS on STN

AN 1999:532438 HCPLUS Full-text

DN 131:299336

TI Triarylaminium Salt Induced Oxidative Cyclizations of Tertiary Amines. Convenient Access to 2-Substituted Pyrrolidinium Salts

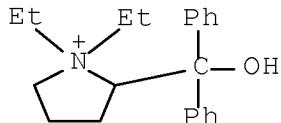
AU Jahn, Ullrich; Aussieker, Susanne

CS Institut fuer Organische Chemie, Technische Universitaet Braunschweig, Braunschweig, D-38106, Germany

SO Organic Letters (1999), 1(6), 849-852  
 CODEN: ORLEF7; ISSN: 1523-7060  
 PB American Chemical Society  
 DT Journal  
 LA English  
 OS CASREACT 131:299336  
 AB Convenient oxidative generation and facile 5-exo cyclization of tertiary aminium radical cations to give distonic 2-substituted pyrrolidinium radical cations is reported. These can be further oxidized to 1,3-dications and trapped by nucleophiles as water, alcs., or chloride ion. Preliminary mechanistic issues and implications will be presented.  
 IT 247118-21-4P 247118-27-0P  
 247118-31-6P 247118-35-0P 247118-37-2P  
 247118-39-4P 247118-40-7P 247118-43-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (triarylaminium salt induced oxidative cyclization of tertiary amines)  
 RN 247118-21-4 HCPLUS  
 CN Pyrrolidinium, 1,1-diethyl-2-(hydroxydiphenylmethyl)-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

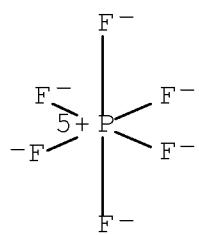
CM 1

CRN 247118-20-3  
 CMF C21 H28 N O



CM 2

CRN 16919-18-9  
 CMF F6 P  
 CCI CCS



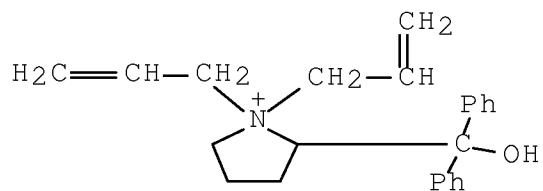
RN 247118-27-0 HCPLUS

CN Pyrrolidinium, 2-(hydroxydiphenylmethyl)-1,1-di-2-propen-1-yl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 247118-26-9

CMF C23 H28 N O

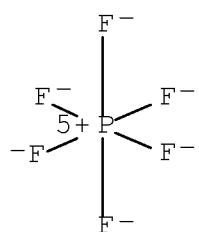


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



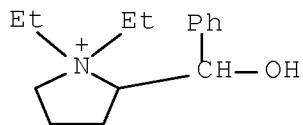
RN 247118-31-6 HCAPLUS

CN Pyrrolidinium, 1,1-diethyl-2-(hydroxyphenylmethyl)-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 247118-30-5

CMF C15 H24 N O

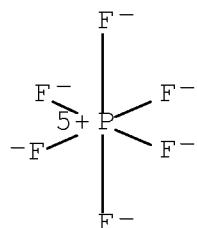


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



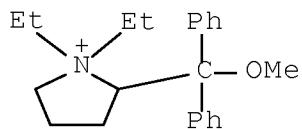
RN 247118-35-0 HCAPLUS

CN Pyrrolidinium, 1,1-diethyl-2-(methoxydiphenylmethyl)-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 247118-34-9

CMF C22 H30 N O

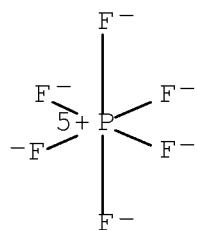


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



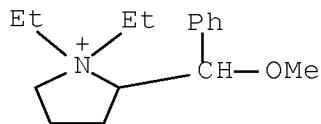
RN 247118-37-2 HCPLUS

CN Pyrrolidinium, 1,1-diethyl-2-(methoxyphenylmethyl)-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 247118-36-1

CMF C16 H26 N O

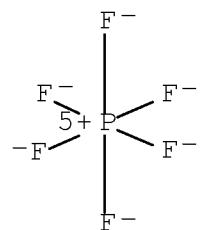


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



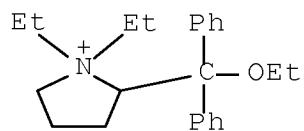
RN 247118-39-4 HCPLUS

CN Pyrrolidinium, 2-(ethoxydiphenylmethyl)-1,1-diethyl-,  
hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 247118-38-3

CMF C23 H32 N O

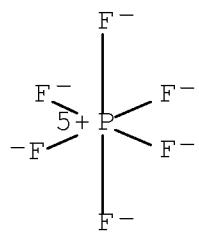


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



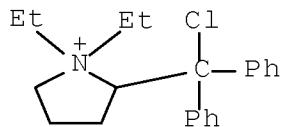
RN 247118-40-7 HCPLUS

CN Pyrrolidinium, 2-(chlorodiphenylmethyl)-1,1-diethyl-,  
hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 247118-22-5

CMF C21 H27 Cl N

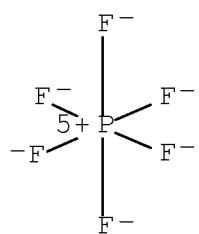


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



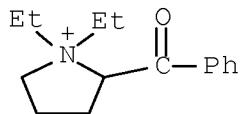
RN 247118-43-0 HCAPLUS

CN Pyrrolidinium, 2-benzoyl-1,1-diethyl-, hexafluorophosphate(1-) (9CI)  
(CA INDEX NAME)

CM 1

CRN 247118-42-9

CMF C15 H22 N O

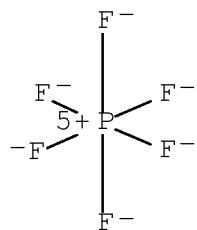


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

IT 247118-21-4P 247118-23-6P 247118-25-8P

247118-27-0P 247118-29-2P 247118-31-6P

247118-33-8P 247118-35-0P 247118-37-2P

247118-39-4P 247118-40-7P 247118-41-8P

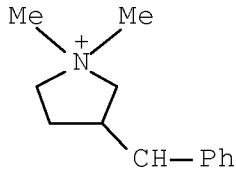
247118-43-0P 247118-45-2P 308140-71-8P 308141-00-6P

RL: SPN (Synthetic preparation); PREP (Preparation)

(triarylaminium salt induced oxidative cyclization of tertiary amines)

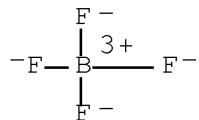
OSC.G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)  
 RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1996:637151 HCAPLUS Full-text  
 DN 125:339949  
 OREF 125:63349a,63352a  
 TI Generation and Study of the Reactivity of  $\alpha$ -Ammonium Distonic Radical Cations in Solution  
 AU Rios, Luz Amalia; Dolbier, William R. Jr.; Paredes, Rodrigo;  
 Lusztyk, Janusz; Ingold, K. U.; Jonnson, Mats  
 CS Department of Chemistry, University of Florida, Gainesville, FL,  
 32611-7200, USA  
 SO Journal of the American Chemical Society (1996), 118(45),  
 11313-11314  
 CODEN: JACSAT; ISSN: 0002-7863  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB  $\alpha$ -Ammonium distonic radical cations have for the first time been purposefully generated and their reactivity studied in solution using both LFP and competition expts. Such species exhibit behavior which is typical of a carbon-bound radical, and rate consts. of cyclization of unsubstituted-, 5-phenyl-, 5,5-diphenyl-4-pentyldimethylammoniomethyl radicals (1.5 + 106 s-1 at 33°, 1.7 + 107 s-1 at 25°, and 3.0 + 107 s-1 at 25° at 33°) indicated that they are somewhat more reactive than analogous hydrocarbon radicals.  
 IT 183849-69-6  
 RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); FORM (Formation, nonpreparative); PROC (Process)  
 (generation and study of reactivity of  $\alpha$ -ammonium distonic radical cations in solution)  
 RN 183849-69-6 HCAPLUS  
 CN Methyl, (1,1-dimethylpyrrolidinium-3-yl)phenyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 183849-68-5  
 CMF C13 H19 N



CM 2

CRN 14874-70-5  
 CMF B F4  
 CCI CCS



CC 67-3 (Catalysis, Reaction Kinetics, and Inorganic Reaction Mechanisms)  
 Section cross-reference(s): 22  
 IT 661-36-9 183849-67-4 183849-69-6 183849-71-0  
 183849-73-2 183849-75-4 183849-77-6 183849-79-8 183849-81-2  
 183849-83-4  
 RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); FORM (Formation, nonpreparative); PROC (Process)  
 (generation and study of reactivity of  $\alpha$ -ammonium distonic radical cations in solution)  
 OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)

L11 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1995:792939 HCAPLUS Full-text  
 DN 123:354687  
 OREF 123:63367a,63370a  
 TI Heat sensitive color developing material  
 IN Tanabe, Hisake; Nakano, Shingi; Nakae, Yasuhiko; Urano, Satoshi;  
 Eguchi, Yoshio  
 PA Nippon Paint Co., Ltd., Japan

SO U.S., 11 pp. Cont.-in-part of U.S. Ser. No. 727,671, abandoned.  
 CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5439516	A	19950808	US 1993-175692	199312 30
	JP 04067988	A	19920303	JP 1990-181878	199007 09

PRAI JP 1990-181878 A 19900709  
 US 1991-727671 B2 19910709

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 123:354687

AB A heat sensitive color developing material containing an electron donating color forming organic compound, a heat activating compound, and a color developer. This material exhibits excellent heat sensitivity and enables rapid color development at low cost.

IT 144382-76-3 171101-69-2

RL: TEM (Technical or engineered material use); USES (Uses)  
 (heat sensitive color developing material)

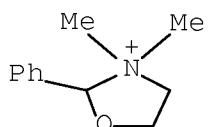
RN 144382-76-3 HCAPLUS

CN Oxazolidinium, 3,3-dimethyl-2-phenyl-, (OC-6-11)-,  
 hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 144382-75-2

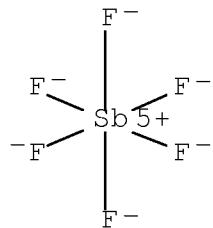
CMF C11 H16 N O



CM 2

CRN 17111-95-4

CMF F6 Sb  
CCI CCS



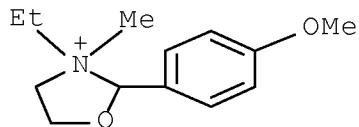
RN 171101-69-2 HCAPLUS

CN Oxazolidinium, 3-ethyl-2-(4-methoxyphenyl)-3-methyl-,  
hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 171101-68-1

CMF C13 H20 N O2

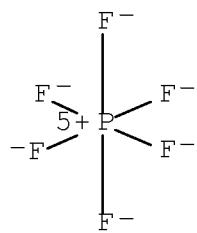


CM 2

CRN 16919-18-9

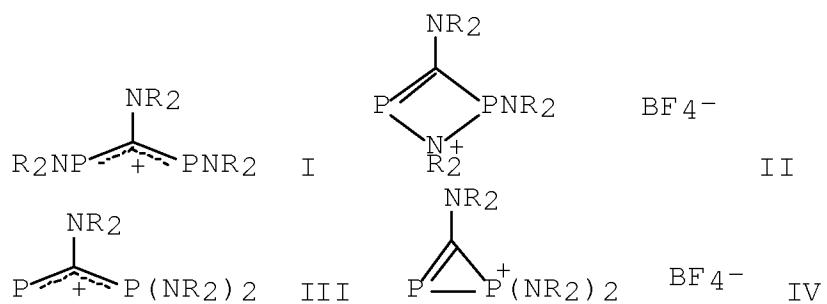
CMF F6 P

CCI CCS



IC ICM C09D011-00  
 INCL 106-21R  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 541-16-2, Di-tert-butyl malonate 20270-53-5, Di-tert-butyl adipate 20487-40-5, tert-Butyl propionate 25852-37-3, Butyl acrylate-methyl methacrylate copolymer 29035-74-3, Butyl acrylate-butyl methacrylate copolymer 29535-38-4, Butyl methacrylate-lauryl methacrylate copolymer 50292-91-6 75805-17-3 89331-94-2 133227-06-2 136608-77-0 144382-74-1 144382-76-3 144382-80-9 144382-82-1 144382-85-4 171101-69-2  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (heat sensitive color developing material)  
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1994:508979 HCAPLUS Full-text  
 DN 121:108979  
 OREF 121:19691a,19694a  
 TI Synthesis and Rearrangement of Intramolecularly Stabilized 1σ<sub>2</sub>,3σ<sub>2</sub>-Diphosphallylic Cations into Intramolecularly Stabilized 1σ<sub>1</sub>,3σ<sub>3</sub>-Diphosphallylic Cations  
 AU Soleilhavoup, Michele; Canac, Yves; Polozov, Alexander M.; Baceiredo, Antoine; Bertrand, Guy  
 CS Laboratoire de Chimie de Coordination, CNRS, Toulouse, 31077, Fr.  
 SO Journal of the American Chemical Society (1994), 116(14), 6149-52  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal  
 LA English  
 OS CASREACT 121:108979  
 GI



AB Two equivalent of boron trifluoride-diethyl ether complex or 1 equiv of trifluoromethanesulfonic acid reacts with C-[bis(diisopropylamino)phosphino]-C,P-bis(diisopropylamino)phosphaalkene R<sub>2</sub>NP:C(NR<sub>2</sub>)P(NR<sub>2</sub>)<sub>2</sub> (R = Me<sub>2</sub>C), cleaving one of the diisopropylamino substituents at the σ<sub>3</sub>-phosphorus atom. This affords the corresponding intermediate 1σ<sub>2</sub>,3σ<sub>2</sub>-diphosphaallylic cation I, which is isolated as the four-membered-heterocycle II. Addition of a catalytic amount of base to II leads to a 1σ<sub>1</sub>,3σ<sub>3</sub>-diphosphaallylic cation intermediate III, which is isolated as the diphosphirenium salt IV. Mesityllithium and the lithium salts of diisopropylamine or dicyclohexylamine react at the σ<sub>2</sub>-phosphorus atom of the cationic heterocycles II and IV, affording the corresponding phosphaalkenes. All the results demonstrate the high electrophilicity of low-coordinated diphosphaallylic cations, which are only isolable as intramolecular donor-acceptor complexes.

IT 156664-17-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(preparation and reaction with base)

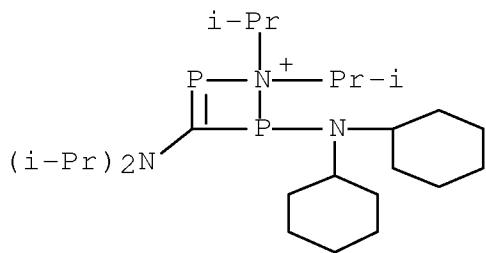
RN 156664-17-4 HCAPLUS

CN 1,2,4-Azadiphosphhetium, 3-[bis(1-methylethyl)amino]-2-(dicyclohexylamino)-1,1-bis(1-methylethyl)-, tetrafluoroborate(1-)(1:1) (CA INDEX NAME)

CM 1

CRN 156664-16-3

CMF C25 H50 N3 P2

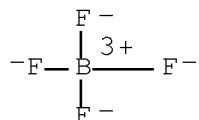


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 22

IT 156664-15-2P 156664-17-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(preparation and reaction with base)OSC.G 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (20  
CITINGS)

L11 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1994:446709 HCAPLUS Full-text

DN 121:46709

OREF 121:8259a,8262a

TI Heat-sensitive color-developing recording material

IN Tanabe, Hisaki; Nakae, Yasuhiko; Nakano, Shingi; Eguchi, Yoshio

PA Nippon Paint Co., Ltd., Japan

SO U.S., 15 pp. Division of U.S. Ser. No. 726,835.

CODEN: USXXAM

DT Patent

LA English

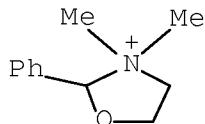
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5288686	A	19940222	US 1993-17481	199302 12
	US 5302194	A	19940412	US 1991-726835	199107 08
PRAI	US 1991-726835	A3	19910708		
	JP 1990-181877	A	19900709		
AB	A heat-sensitive color-developing recording material contains an electron-donating color-forming organic compound, a heat-activating compound, and a color developer. The material has excellent heat sensitivity in which color can be developed rapidly.				
IT	144382-76-3				
	RL: USES (Uses) (heat-sensitive color-developing recording materials containing)				
RN	144382-76-3 HCPLUS				
CN	Oxazolidinium, 3,3-dimethyl-2-phenyl-, (OC-6-11)-, hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)				

CM 1

CRN 144382-75-2

CMF C11 H16 N O

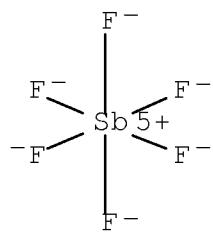


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM B41M005-20  
ICS C09D011-02  
INCL 503209000  
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 20270-53-5, Di-tert-butyl adipate 31604-40-7 50292-91-6,  
3,3-Bis(1-butyl-2-methylindol-3-yl)phthalide 64309-46-2  
71436-70-9 75805-17-3 89331-94-2,  
3-Dibutylamino-6-methyl-7-(phenylamino)fluoran 129254-44-0  
131212-08-3 136608-77-0 144031-48-1 144031-49-2 144382-74-1  
**144382-76-3** 144382-80-9 144382-84-3 144382-85-4  
147341-81-9 147360-96-1 156083-92-0 156083-93-1  
RL: USES (Uses)  
(heat-sensitive color-developing recording materials containing)  
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1  
CITINGS)  
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 13 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
AN 1994:220511 HCAPLUS Full-text  
DN 120:220511  
OREF 120:39141a,39144a  
TI Two-coat-one-bake process for solvent-based high-solids metallic  
coating  
IN Nakano, Shinji; Nishizawa, Koji; Okude, Yoshitaka  
PA Nippon Paint Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
----- ----- ----- -----  
-----  
PI JP 05253537 A 19931005 JP 1992-89907

199203  
12

JP 2844280 B2 19990106  
 PRAI JP 1992-89907 19920312  
 AB The title process providing high-performance coatings involves application of metallic pigment-containing base coat and clear topcoat, containing curing catalysts containing onium salts comprising (non)cyclic ammonium cation or sulfonium cation with R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>C<sub>6</sub>H<sub>2</sub>C(R<sub>4</sub>)(R<sub>5</sub>) group bonded to N or S and AsF<sub>6</sub>, SbF<sub>6</sub>, BF<sub>4</sub>, PF<sub>6</sub>, ClO<sub>4</sub>, FeCl<sub>4</sub>, CF<sub>3</sub>SO<sub>3</sub>, aromatic or aliphatic sulfonic or carboxylic acid ion. Acrylic or polyester vehicles were used with acrylic microgels, aminoplast hardeners, Al pigments, and curing catalysts, e.g., 1-(4-methylbenzyl)tetrahydrothiophenium hexafluoroantimonate, N-(2,6-dichlorobenzyl)-4-cyanopyridinium p-toluenesulfonate, N-(4-chlorobenzyl)-N,N-dimethylanilinium 4-dodecylbenzenesulfonate, N-(2-methylbenzyl)-4-cyanopyridinium hexafluorophosphate, etc., at coating solids content ≥45%.

IT 154396-39-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (crosslinking catalysts, for acrylic and polyester coatings containing aminoplasts)

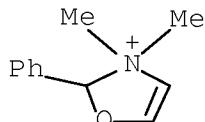
RN 154396-39-1 HCAPLUS

CN Oxazolium, 2,3-dihydro-3,3-dimethyl-2-phenyl-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 141915-33-5

CMF C11 H14 N O

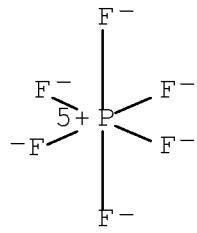


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



IC ICM B05D005-06  
 ICS B05D001-36; B05D005-06; B05D007-24  
 CC 42-10 (Coatings, Inks, and Related Products)  
 IT 97744-46-2 153359-44-5 153359-45-6 153359-48-9 153359-49-0  
 153359-50-3 153359-51-4 153359-53-6 **154396-39-1**  
 154396-40-4 154397-34-9  
 RL: CAT (Catalyst use); USES (Uses)  
 (crosslinking catalysts, for acrylic and polyester coatings  
 containing aminoplasts)

L11 ANSWER 14 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1993:505987 HCAPLUS Full-text  
 DN 119:105987  
 OREF 119:18875a,18878a  
 TI Heat-sensitive coloring material for recording sheet  
 IN Tanabe, Hisanori; Nakae, Yasuhiko; Nakano, Shinji; Eguchi, Yoshio  
 PA Nippon Paint K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DT Patent

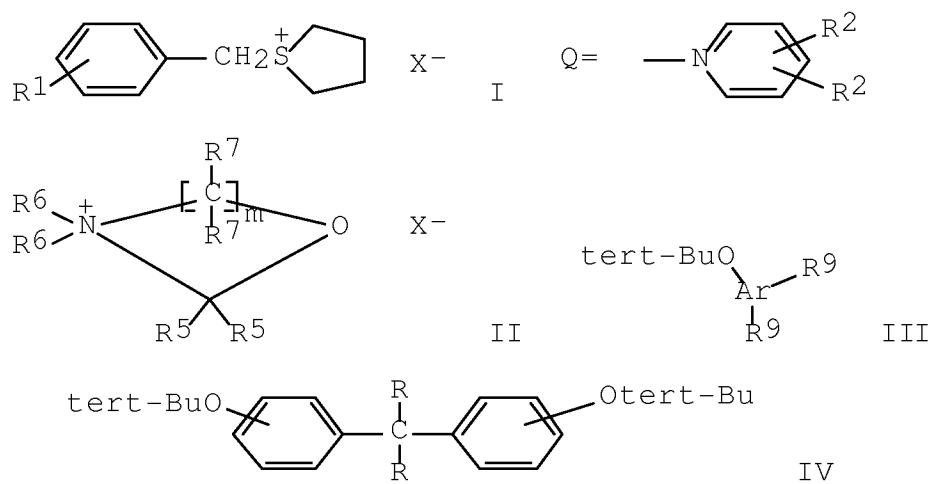
LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04067987	A	19920303	JP 1990-181877	199007 09
	US 5302194	A	19940412	US 1991-726835	199107 08

PRAI JP 1990-181877 A 19900709

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 GI



**AB** A heat-sensitive coloring material contains (A) an electron-donating coloring organic compound, (B) a heat-activating agent selected from cyclic sulfonium salts [I;  $R_1 = H, R, OR, \text{halo}, \text{NO}_2$ ;  $R = (\text{OH-}\text{substituted}) \text{C1-12 alkyl, cycloalkyl}$ ;  $X = \text{AsF}_6^-, \text{SbF}_6^-, \text{BF}_4^-, \text{BF}_6^-, \text{PF}_6^-, \text{ClO}_4^-, \text{FeCl}_4^-, \text{CF}_3\text{SO}_3^-, \text{RSO}_3^-, \text{RCO}_2^-$ ],  $(\text{R}_2)_3\text{C}_6\text{H}_2\text{C}(\text{R}_3)\text{2A+X}^-$  [ $\text{R}_2 = \text{COR, R}_1, \text{OH, cyano, NH}_2$ ;  $\text{R}_3 = H, R, \text{halo}$ ;  $A = Q, \text{N}(\text{R}_4)_3$ ; when  $A = \text{N}(\text{R}_4)_3$ , at least one of  $\text{R}_3 \neq H$ ;  $\text{R}_4 = (\text{un})\text{substituted C1-12 alkyl, alkenyl, or Ph}$ ;  $R, R_1, X$  are defined as above], and heterocyclic ammonium salts [II;  $\text{R}_5 = H, R, \text{C2-3 alkenyl, R}_8$ ;  $\text{R}_6 = R, \text{C2-3 alkenyl, R}_8$ ;  $\text{R}_7 = H, \text{OH, R, OR, R}_8$ ;  $\text{R}_8 = (\text{un})\text{substituted Ph}$ ;  $m = 1-4$ ;  $R, X$  are defined as above], and (C) a color-developing agent selected from aromatic compds. (III;  $\text{Ar} = \text{benzene or naphthalene ring}$ ;  $\text{R}_9 = H, OR, O_2CR, \text{COR, halo, NO}_2$ ;  $R$  is defined as above) and diphenylmethane derivs. (IV;  $R$  is defined as above), and (D) a resin having number-average mol. weight 500-50,000. The recording material is not colored in the presence of an organic solvent, thus is easy to handle, and also the choice of heat-activating agent (B) allows the recording material to be rapidly colored at desired, relatively low temperature. Furthermore only a very small amount of the expensive heat-activating agent is required to effectively initiate the decomposition of the tert-butoxyphenyl group to hydroxyphenyl group in the coloring agent and subsequent coloration, and thus the recording material is economically manufactured.

**IT** 144382-76-3

RL: USES (Uses)

(heat-activating agent, heat-sensitive recording material)

containing)

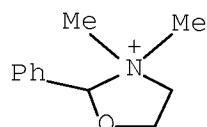
RN 144382-76-3 HCAPLUS

CN Oxazolidinium, 3,3-dimethyl-2-phenyl-, (OC-6-11)-,  
hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 144382-75-2

CMF C11 H16 N O

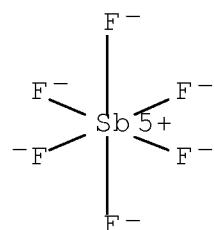


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM B41M005-26

ICS B41M005-30

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 126888-77-5 136608-77-0 144382-71-8 144382-74-1

**144382-76-3** 144382-80-9 144382-84-3 144382-85-4

RL: USES (Uses)

(heat-activating agent, heat-sensitive recording material containing)

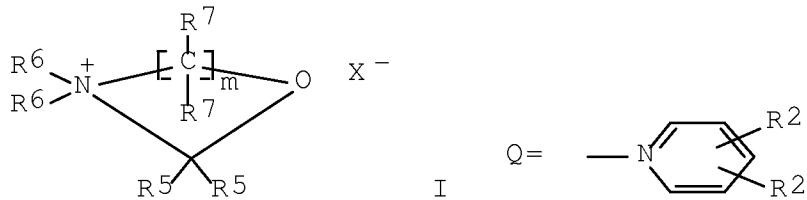
OSC.G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L11 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1993:437599 HCAPLUS Full-text  
 DN 119:37599  
 OREF 119:6695a,6698a  
 TI Heat-sensitive coloring material for recording sheet  
 IN Tanabe, Hisanori; Nakano, Shinji; Nakae, Yasuhiko; Urano, Satoru;  
 Eguchi, Yoshio  
 PA Nippon Paint K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04067988	A	19920303	JP 1990-181878	19900709
	US 5439516	A	19950808	US 1993-175692	19931230

PRAI JP 1990-181878 A 19900709  
 US 1991-727671 B2 19910709

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 GI



AB A heat-sensitive recording material contains (A) an electron-donating coloring organic compound, (B) a heat-activating agent selected from  $(\text{R}_2)_3\text{C}_6\text{H}_2\text{C}(\text{R}_3)2\text{A}+\text{X}^-$  [ $\text{R}_2 = \text{COR, R}_1, \text{OH, cyano, NH}_2$ ;  $\text{R}_3 = \text{H, R, halo}$ ; A

= Q, N(R<sub>4</sub>)<sub>3</sub>; when A = N(R<sub>4</sub>)<sub>3</sub>, at least one of R<sub>3</sub> ≠ H; R<sub>4</sub> = (un)substituted C<sub>1-12</sub> alkyl, alkenyl, or Ph; R = C<sub>1-4</sub> (hydroxy)(cyclo)alkyl; R<sub>1</sub> = H, R, OR, halo, NO<sub>2</sub>; X = AsF<sub>6</sub>, SbF<sub>6</sub>, BF<sub>4</sub>, BF<sub>6</sub>, PF<sub>6</sub>, ClO<sub>4</sub>, FeCl<sub>4</sub>, CF<sub>3</sub>SO<sub>3</sub>, RSO<sub>3</sub>, RCO<sub>2</sub>] and heterocyclic ammonium salts [I; R<sub>5</sub> = H, R, C<sub>2-3</sub> alkenyl, R<sub>8</sub>; R<sub>6</sub> = R, C<sub>2-3</sub> alkenyl, R<sub>8</sub>; R<sub>7</sub> = H, OH, R, OR, R<sub>8</sub>; R<sub>8</sub> = (un)substituted Ph; m = 1-4; R, X are defined as above]. It addnl. contains a color developer, having higher b.p. than that of the heat-activating agent, selected from tert-Bu esters of C<sub>3-18</sub> aliphatic carboxylic acids, C<sub>6-10</sub> carbocyclic or heterocyclic carboxylic acids, and film-forming polymers having tert-Bu ester side chain and number-average mol. weight 500-50,000. The recording material is not colored in the presence of an organic solvent, thus is easy to handle, and also the choice of heat-activating agent (B) allows the recording material to be rapidly colored at desired, relatively low temperature. Furthermore only a very small amount of the expensive heat-activating agent is required to effectively initiate the decomposition of the tert-butoxyphenyl group to hydroxyphenyl group in the coloring agent and subsequent coloration, and thus the recording material is economically manufactured.

IT 144382-76-3

RL: USES (Uses)

(heat-activating agent, heat-sensitive recording material containing)

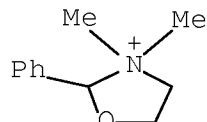
RN 144382-76-3 HCPLUS

CN Oxazolidinium, 3,3-dimethyl-2-phenyl-, (OC-6-11)-, hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 144382-75-2

CMF C11 H16 N O

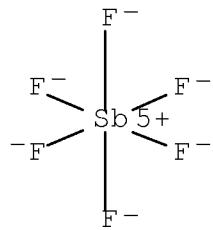


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM B41M005-26  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 133227-06-2 144382-70-7 144382-71-8 144382-72-9 144382-73-0  
 144382-74-1 144382-76-3 144382-78-5 144382-80-9  
 144382-82-1  
 RL: USES (Uses)  
 (heat-activating agent, heat-sensitive recording material containing)  
 L11 ANSWER 16 OF 30 HCPLUS COPYRIGHT 2009 ACS on STN  
 AN 1993:61658 HCPLUS Full-text  
 DN 118:61658  
 OREF 118:11017a,11020a  
 TI Acrylic epoxy thermosetting resin compositions  
 IN Yamada, Atsushi; Takae, Masaki; Mure, Shoichi; Takeoka, Kazuhiko;  
 Nakano, Shinji  
 PA Nippon Paint Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04139280	A	19920513	JP 1990-261978	19900928

PRAI JP 1990-261978 19900928  
 AB Title compns. with good storage stability comprise (A) polymers having epoxy value 70-250, OH value <150, acid value <20, and number-average mol. weight 1000-20,000, (B) polyepoxy compds. and (C) heat-

sensitive latent cationic polymerization catalysts at A/B ratio 100:0-150 and C/(A + B) 0.05-5%. Thus, a clean composition cong. 0.5 part N-(4-chlorobenzyl)-N,N-dimethylanilinium SbF<sub>6</sub><sup>-</sup> and 153.8 parts styrene-glycidyl methacrylate-2-hydroxyethyl methacrylate-Bu acrylate-Bu methacrylate copolymer showed good storage stability (50°, 10 days) and was baked at 140° for 20 min to give a film with good abrasion, chemical, water, and weather resistance.

IT 144382-76-3

RL: CAT (Catalyst use); USES (Uses)

(latent catalyst, heat-sensitive, for cationic polymerization, for acrylic epoxy coatings)

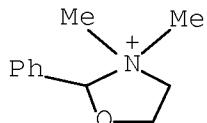
RN 144382-76-3 HCAPLUS

CN Oxazolidinium, 3,3-dimethyl-2-phenyl-, (OC-6-11)-, hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 144382-75-2

CMF C11 H16 N O

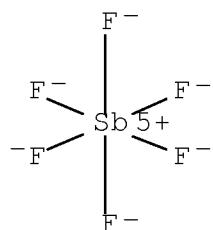


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



IC ICM C09D163-00  
 ICS B05D001-36; B05D007-24; C08G059-68; C08L063-00; C09D163-00  
 CC 42-9 (Coatings, Inks, and Related Products)  
 IT 126803-31-4 136608-77-0 144207-48-7 144382-76-3  
 RL: CAT (Catalyst use); USES (Uses)  
     (latent catalyst, heat-sensitive, for cationic polymerization, for  
     acrylic epoxy coatings)

L11 ANSWER 17 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1992:591985 HCAPLUS Full-text  
 DN 117:191985  
 OREF 117:33171a,33174a  
 TI Reaction of aminocarbene complexes of chromium with alkynes. 1.  
     Formation and rearrangement of ketene and nitrogen ylide complexes  
 AU Chelain, Evelyne; Goumont, Regis; Hamon, Louis; Parlier, Andree;  
     Rudler, Michele; Rudler, Henri; Daran, Jean Claude; Vaissermann,  
     Jacqueline  
 CS Lab. Chim. Org., Univ. Pierre et Marie Curie, Paris, 75252, Fr.  
 SO Journal of the American Chemical Society (1992), 114(21), 8088-98  
 CODEN: JACSAT; ISSN: 0002-7863  
 DT Journal  
 LA English  
 OS CASREACT 117:191985  
 AB The title reactions of chromium-containing carbene complexes  
     (CO)5Cr:C(R1)N(R2R3) [R1 = H, Me, Ph; R2 = Me; R3 = Me, cyclopropyl,  
     cyclopropylmethyl; R2R3 = (CH<sub>2</sub>)<sub>5</sub>] 8 and  
     (CO)5Cr:C[(CH<sub>2</sub>)<sub>3</sub>C.tplbond.CPh]N(R1R2) [R1 = R2 = Me; R1R2 = (CH<sub>2</sub>)<sub>5</sub>,  
     (CH<sub>2</sub>)<sub>4</sub>] 9, bearing alkyl groups of low migratory aptitude on nitrogen  
     were examined. In contrast to complexes in which nitrogen bears  
     either an alkyl and an allyl or a benzyl group or is part of a  
     strained cycle, which give heterocycles upon alkyne/CO insertions  
     followed by nitrogen-to-carbon migrations, complexes 8 and 9 lead to  
     stable nitrogen ylides, which could be fully characterized by x-ray  
     crystallog. in the case of 8 [R1 = H, R2R3 = (CH<sub>2</sub>)<sub>5</sub>] and 9 (R1 = R2 =  
     Me). Moreover, in the case of complexes of the general structure 9,  
     ketene precursors of the ylides could either be detected (R1 = Me, R2  
     = CH<sub>2</sub>Ph) or isolated and characterized [R2R3 = (CH<sub>2</sub>)<sub>5</sub>]. The new  
     ylide complexes undergo, upon moderate heating, Stevens-type  
     rearrangements to the expected heterocyclic compds. as a result of  
     nitrogen-to-carbon migrations of various alkyl groups, and upon  
     treatment with dimethyldioxirane, they undergo oxidation to lactone  
     complexes.

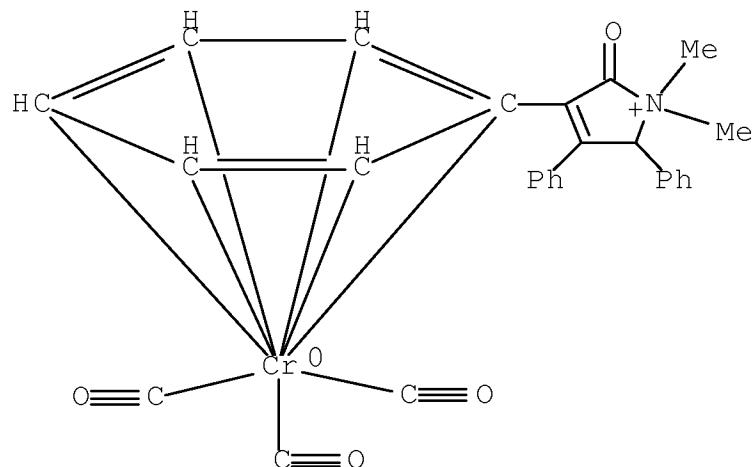
IT 143857-10-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
     (preparation, crystal and mol. structure of)

RN 143857-10-7 HCAPLUS

CN Chromium(1+), tricarbonyl[2,5-dihydro-1,1-dimethyl-2-oxo-3-(η<sup>6</sup>-phenyl)-4,5-diphenyl-1H-pyrrolium]-, tetrafluoroborate(1-) (9CI)  
 (CA INDEX NAME)

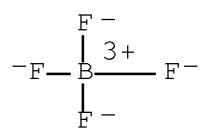
CM 1

CRN 143857-09-4  
 CMF C27 H22 Cr N O4  
 CCI CCS



CM 2

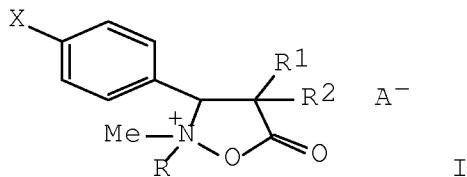
CRN 14874-70-5  
 CMF B F4  
 CCI CCS



CC 29-11 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 75

IT 57205-92-2P 136710-68-4P 138176-97-3P 138177-00-1P  
 143841-26-3P 143841-27-4P 143857-10-7P 143857-11-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation, crystal and mol. structure of)  
 OSC.G 48 THERE ARE 48 CAPLUS RECORDS THAT CITE THIS RECORD (51  
 CITINGS)

L11 ANSWER 18 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1992:571276 HCAPLUS Full-text  
 DN 117:171276  
 OREF 117:29613a,29616a  
 TI Isoxazolidine compounds. XI.  
 2,2-Dialkyl-3-aryl-5-oxoisoxazolidinium salts: cyclic analogs of  
 Polonovski intermediates  
 AU Steudle, Harald; Stamm, Helmut  
 CS Fak. Pharm., Univ. Heidelberg, Heidelberg, D-6900, Germany  
 SO Archiv der Pharmazie (Weinheim, Germany) (1992), 325(6), 329-31  
 CODEN: ARPMA; ISSN: 0365-6233  
 DT Journal  
 LA German  
 OS CASREACT 117:171276  
 GI



AB Title salts I ( $R = Me, Et$ ;  $R1 = H, Me$ ;  $R2 = H, Me, CO2Me$ ;  $X = H, Cl$ ) were prepared in 45-95% yields by quaternization of the corresponding 2-methyl-3-aryl-5-oxoisoxazolidines with magic methyl or triethyloxonium tetrafluoroborate. The very sensitive cations I underwent solvolysis easily in MeOH without recognizable Polonovskii rearrangement; the products were  $4-XC_6H_4CH:CR_2CO_2Me$ .

IT 143601-60-9P 143601-62-1P  
 143601-64-3P 143601-66-5P 143601-78-9P  
 143601-80-3P 143601-82-5P 143601-84-7P  
 143601-86-9P 143601-88-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and solvolysis of)

RN 143601-60-9 HCPLUS

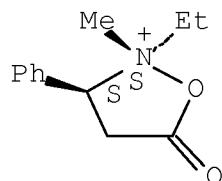
CN Isoxazolidinium, 2-ethyl-2-methyl-5-oxo-3-phenyl-, trans-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 143601-59-6

CMF C12 H16 N O2

Relative stereochemistry.

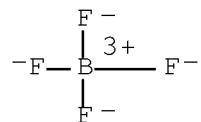


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 143601-62-1 HCPLUS

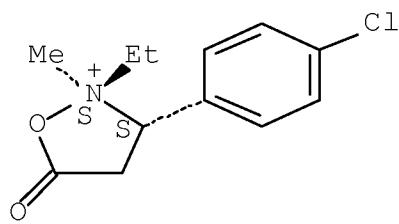
CN Isoxazolidinium, 3-(4-chlorophenyl)-2-ethyl-2-methyl-5-oxo-, trans-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 143601-61-0

CMF C12 H15 Cl N O2

Relative stereochemistry.

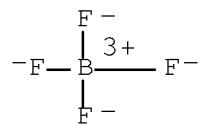


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 143601-64-3 HCAPLUS

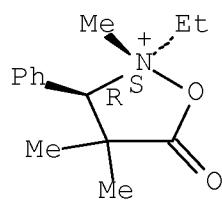
CN Isoxazolidinium, 2-ethyl-2,4,4-trimethyl-5-oxo-3-phenyl-, trans-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 143601-63-2

CMF C14 H20 N O2

Relative stereochemistry.

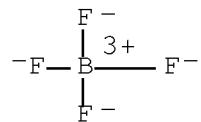


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 143601-66-5 HCPLUS

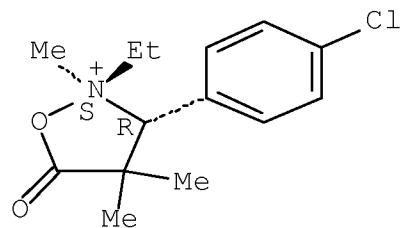
CN Isoxazolidinium, 3-(4-chlorophenyl)-2-ethyl-2,4,4-trimethyl-5-oxo-,  
trans-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 143601-65-4

CMF C14 H19 Cl N O2

Relative stereochemistry.

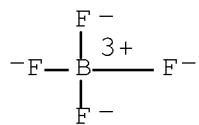


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 143601-78-9 HCPLUS

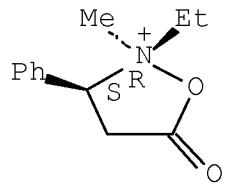
CN Isoxazolidinium, 2-ethyl-1-methyl-5-oxo-3-phenyl-, cis-,  
tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 143601-77-8

CMF C12 H16 N O2

Relative stereochemistry.

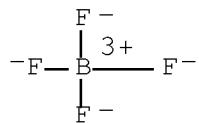


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



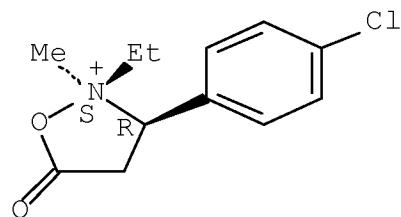
RN 143601-80-3 HCPLUS

CN Isoxazolidinium, 3-(4-chlorophenyl)-2-ethyl-2-methyl-5-oxo-, cis-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

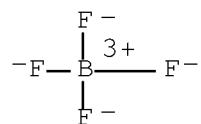
CRN 143601-79-0  
CMF C12 H15 Cl N O2

Relative stereochemistry.



CM 2

CRN 14874-70-5  
CMF B F4  
CCI CCS



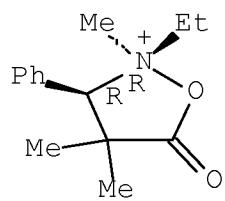
RN 143601-82-5 HCAPLUS

CN Isoxazolidinium, 2-ethyl-2,4,4-trimethyl-5-oxo-3-phenyl-, cis-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 143601-81-4  
CMF C14 H20 N O2

Relative stereochemistry.

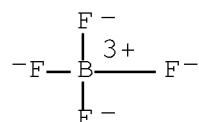


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 143601-84-7 HCAPLUS

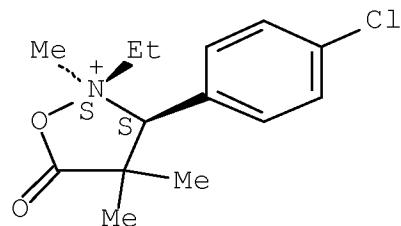
CN Isoxazolidinium, 3-(4-chlorophenyl)-2-ethyl-2,4,4-trimethyl-5-oxo-,  
cis-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 143601-83-6

CMF C14 H19 Cl N O2

## Relative stereochemistry.

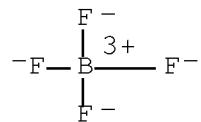


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



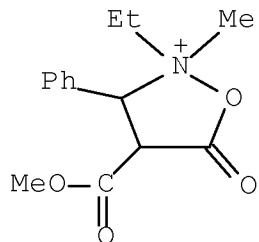
RN 143601-86-9 HCAPLUS

CN Isoxazolidinium, 2-ethyl-4-(methoxycarbonyl)-2-methyl-5-oxo-3-phenyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 143601-85-8

CMF C14 H18 N O4

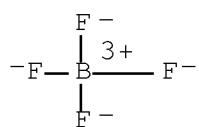


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



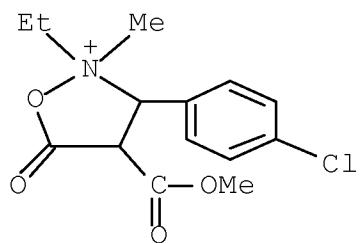
RN 143601-88-1 HCPLUS

CN Isoxazolidinium, 3-(4-chlorophenyl)-2-ethyl-4-(methoxycarbonyl)-2-methyl-5-oxo-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 143601-87-0

CMF C14 H17 Cl N O4

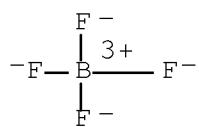


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 28-6 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 143601-60-9P 143601-62-1P

143601-64-3P    143601-66-5P    143601-68-7P  
143601-70-1P    143601-72-3P    143601-74-5P    143601-76-7P  
143601-78-9P    143601-80-3P    143601-82-5P  
143601-84-7P    143601-86-9P    143601-88-1P

143625-66-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(preparation and solvolysis of)

L11 ANSWER 19 OF 30 HCPLUS COPYRIGHT 2009 ACS on STN

AN 1992:428879 HCAPLUS Full-text

DN 117:28879

OREF 117:5199a, 5202a

TI Thermosetting resins containing cationic polymerization catalysts for coating materials

IN Nakano, Shinji; Urano, Satoru; Osugi, Koji

PA Nippon Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

D1 Patent

LA Japane

FAN.CNT 1

PATE

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17

PRAI JP 1990-127782 19900517

OS MARPAT 117:28879

AB The title polymerization catalysts are quaternary ammonium salts such as N-( $\alpha$ , $\alpha$ -dimethylbenzyl)pyridinium hexafluoroantimonate (I), N-( $\alpha$ -methylbenzyl)-N,N-dimethylaniline hexafluoroantimonate, N-( $\alpha$ -methylbenzyl)-pyridinium- hexafluoroantimonate, etc. Thus, 90 parts (solids) 1.88:2.59:28.11:25:30 iso-Bu methacrylate-Bu acrylate-Me methacrylate-styrene-glycidyl methacrylate copolymer was mixed with 2 parts I, coated on tin plate, and baked to prepare a colorless coating.

IT 141915-34-6 141915-36-8 141915-38-0

141915-41-5      141915-46-0

RL: CAT (Catalyst use); USES (Uses)

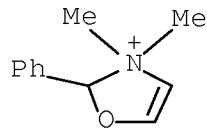
(catalysts, for thermosetting resins for coating materials)

RN 141915-34-6 HCAPLUS

CN Oxazolium, 2,3-dihydro-3,3-dimethyl-2-phenyl-,

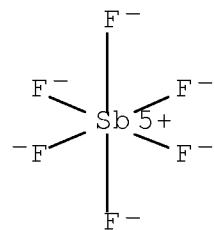
(OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CRN 141915-33-5  
 CMF C11 H14 N O



CM 2

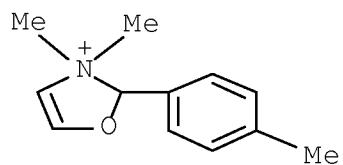
CRN 17111-95-4  
 CMF F6 Sb  
 CCI CCS



RN 141915-36-8 HCAPLUS  
 CN Oxazolium, 2,3-dihydro-3,3-dimethyl-2-(4-methylphenyl)-,  
 (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

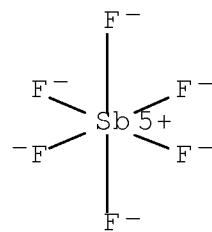
CM 1

CRN 141915-35-7  
 CMF C12 H16 N O



CM 2

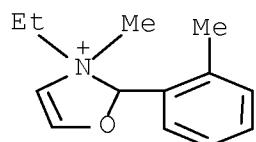
CRN 17111-95-4  
 CMF F6 Sb  
 CCI CCS



RN 141915-38-0 HCAPLUS  
 CN Oxazolium, 3-ethyl-2,3-dihydro-3-methyl-2-(2-methylphenyl)-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 141915-37-9  
 CMF C13 H18 N O

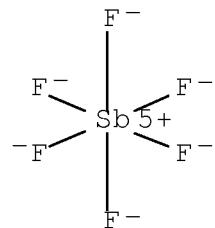


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



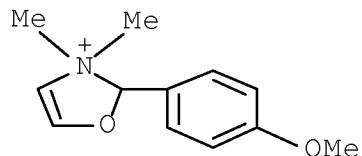
RN 141915-41-5 HCAPLUS

CN Oxazolium, 2,3-dihydro-2-(4-methoxyphenyl)-3,3-dimethyl-,  
(OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 141915-40-4

CMF C12 H16 N O2

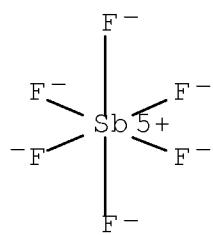


CM 2

CRN 17111-95-4

CMF F6 Sb

CCI CCS



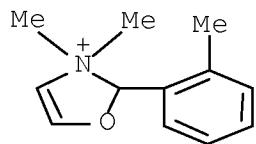
RN 141915-46-0 HCPLUS

CN Oxazolium, 2,3-dihydro-3,3-dimethyl-2-(2-methylphenyl)-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 141915-45-9

CMF C12 H16 N O

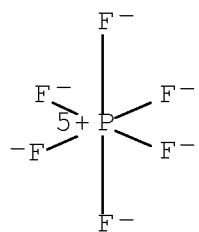


CM 2

CRN 16919-18-9

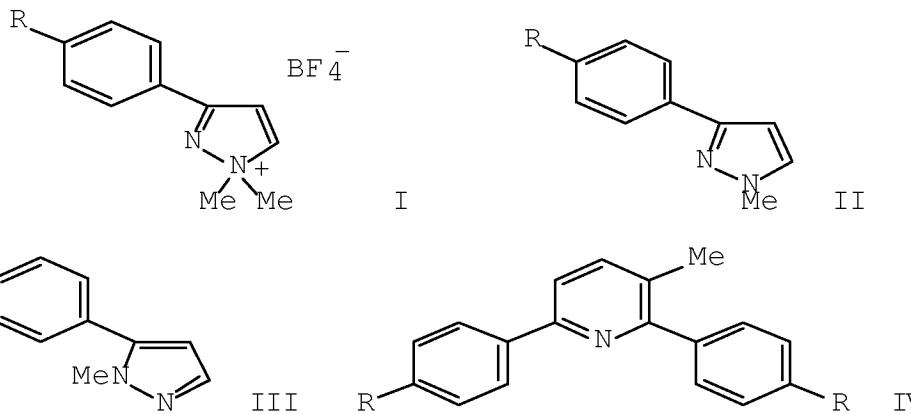
CMF F6 P

CCI CCS



IC ICM C08F004-00  
 ICS C08F004-06; C08G059-68  
 CC 42-10 (Coatings, Inks, and Related Products)  
 IT 136608-55-4 136608-64-5 136608-77-0 136842-16-5 141915-32-4  
**141915-34-6** **141915-36-8** **141915-38-0**  
 141915-39-1 141915-41-5 141915-43-7 141915-44-8  
**141915-46-0** 141915-47-1 141915-49-3 141979-77-3  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for thermosetting resins for coating materials)

L11 ANSWER 20 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1992:174051 HCAPLUS Full-text  
 DN 116:174051  
 OREF 116:29459a,29462a  
 TI Thermolyses of 1,1-dimethyl-2-pyrazolinium fluoborates. Evidence for spiro[2,5]-1-aza-1,4,6-octatrienyl cation  
 AU Subramaniam, Girija  
 CS Dep. Chem., Penn State Univ., Hazleton, PA, 18201, USA  
 SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1992), 31B(3), 172-6  
 CODEN: IJSBDB; ISSN: 0376-4699  
 DT Journal  
 LA English  
 GI



AB Thermolysis of 3-aryl-1,1-dimethyl-2-pyrazolinium fluoroborates I ( $\text{R} = \text{H}, \text{Me}, \text{MeO}, \text{Br}, \text{O}_2\text{N}$ ) gives isomeric mixts. of 3-aryl-1-methylpyrazoles II and 5-aryl-1-methylpyrazoles III as major products

in complete contrast to the corresponding acyclic analogs. 2,6-Diaryl-3-methylpyridines IV were isolated only in trace quantities. The probable reasons for this unique behavior were explored using semi-empirical calcns., non-kinetic methods and radiolabeling expts. A pathway is proposed.

IT 139933-83-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of)

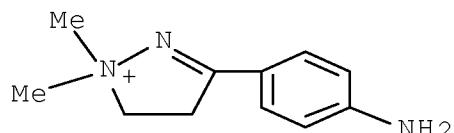
RN 139933-83-8 HCPLUS

CN 1H-Pyrazolium, 3-(4-aminophenyl)-4,5-dihydro-1,1-dimethyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 139933-82-7

CMF C11 H16 N3

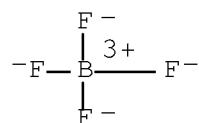


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



IT 139933-70-3P 139933-72-5P

139933-74-7P 139933-76-9P 139933-78-1P

139933-85-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)

(preparation and thermolysis of, mechanism of)

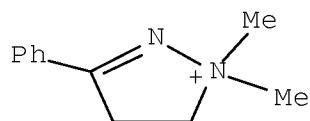
RN 139933-70-3 HCPLUS

CN 1H-Pyrazolium, 4,5-dihydro-1,1-dimethyl-3-phenyl-,  
tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 46186-33-8

CMF C11 H15 N2

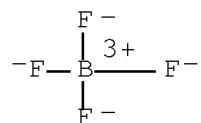


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



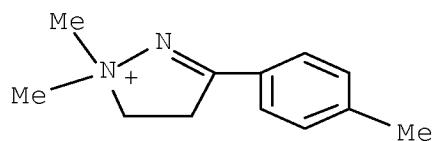
RN 139933-72-5 HCPLUS

CN 1H-Pyrazolium, 4,5-dihydro-1,1-dimethyl-3-(4-methylphenyl)-,  
tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 139933-71-4

CMF C12 H17 N2

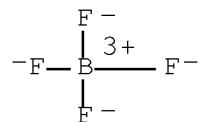


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



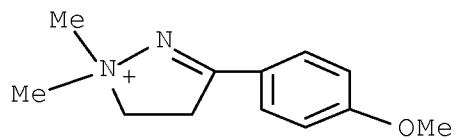
RN 139933-74-7 HCAPLUS

CN 1H-Pyrazolium, 4,5-dihydro-3-(4-methoxyphenyl)-1,1-dimethyl-,  
tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 139933-73-6

CMF C12 H17 N2 O

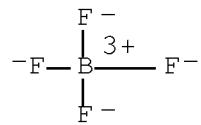


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



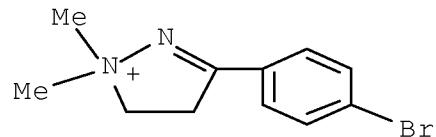
RN 139933-76-9 HCPLUS

CN 1H-Pyrazolium, 3-(4-bromophenyl)-4,5-dihydro-1,1-dimethyl-,  
tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 139933-75-8

CMF C11 H14 Br N2

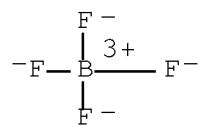


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



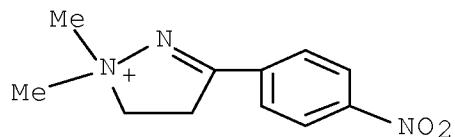
RN 139933-78-1 HCPLUS

CN 1H-Pyrazolium, 4,5-dihydro-1,1-dimethyl-3-(4-nitrophenyl)-,

tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

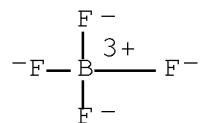
CM 1

CRN 139933-77-0  
CMF C11 H14 N3 O2



CM 2

CRN 14874-70-5  
CMF B F4  
CCI CCS

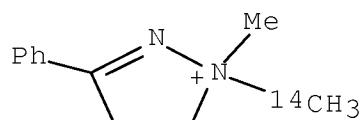


RN 139933-85-0 HCAPLUS

CN 1H-Pyrazolium, 4,5-dihydro-1-methyl-1-(methyl-14C)-3-phenyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 139933-84-9  
CMF C11 H15 N2

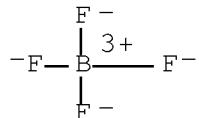


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 22

IT 139933-83-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of)IT 139933-70-3P 139933-72-5P  
139933-74-7P 139933-76-9P 139933-78-1P  
139933-85-0PRL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(preparation and thermolysis of, mechanism of)OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1  
CITINGS)

L11 ANSWER 21 OF 30 HCPLUS COPYRIGHT 2009 ACS on STN

AN 1991:429457 HCPLUS Full-text

DN 115:29457

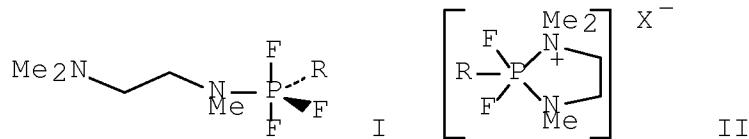
OREF 115:5189a,5192a

TI Reactions of fluorophosphoranes with  
N,N,N'-trimethyl-N'-(trimethylsilyl)ethylenediamine.  
Intramolecularly stabilized azonium hexafluorophosphates by fluoride  
abstraction from N,N,N'-trimethylethylenediamine-substituted  
fluorophosphoranes with phosphorus pentafluoride

AU Kaukorat, Thomas; Jones, Peter G.; Schmutzler, Reinhard

CS Inst. Anorg. Anal. Chem., Tech. Univ. Braunschweig, Braunschweig,  
D-3300, GermanySO Chemische Berichte (1991), 124(6), 1335-46  
CODEN: CHBEAM; ISSN: 0009-2940

DT Journal  
 LA English  
 OS CASREACT 115:29457  
 GI

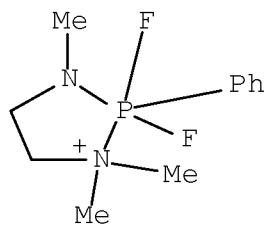


AB Reaction of the tetrafluorophosphoranes RPF<sub>4</sub> (R = Me, Ph, C<sub>6</sub>F<sub>5</sub>, Me<sub>3</sub>SiCH<sub>2</sub>, 2,5-Me<sub>2</sub>C<sub>6</sub>H<sub>3</sub>) with N,N,N'-trimethyl-N'-(trimethylsilyl)ethylenediamine gave the corresponding trifluorophosphoranes I by cleavage of the Si-N bond and elimination of Me<sub>3</sub>SiF. In an analogous reaction the difluorophosphoranes R<sub>1</sub>R<sub>2</sub>PF<sub>2</sub>NMeCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub> (R<sub>1</sub> = R<sub>2</sub> = Ph; R<sub>1</sub> = Ph, R<sub>2</sub> = C<sub>4</sub>H<sub>4</sub>N) are formed. Some of these N,N,N'-trimethylethylenediamine-substituted di- and trifluorophosphoranes react with PF<sub>5</sub> as a Lewis acid to form the corresponding azonium hexafluorophosphates II (R = Me, Me<sub>3</sub>SiCH<sub>2</sub>, Ph, X = PF<sub>6</sub>) as a result of fluoride abstraction and intramol. Me<sub>2</sub>N→P donor-acceptor interaction. II (R = NMe<sub>2</sub>, X = Cl) shows dynamic behavior in solution. An exchange process is observed for the axial and equatorial fluorine atoms by <sup>19</sup>F and <sup>31</sup>P NMR spectroscopy. X-ray structure anal. of the compds. II reveals the expected trigonal-bipyramidal geometry at phosphorus. The ethylenediamine ligand forms a chelate ring, whereby one axial and one equatorial site are bridged. The coordinate P-N bonds are very long (up to 207 pm).

IT 132750-93-7P 132750-95-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 132750-93-7 HCPLUS  
 CN 1,3,2-Diazaphospholidinium, 2,2-difluoro-2,2-dihydro-1,1,3-trimethyl-2-phenyl-, stereoisomer, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 132750-92-6  
 CMF C11 H18 F2 N2 P

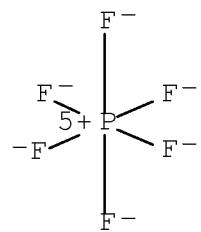


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



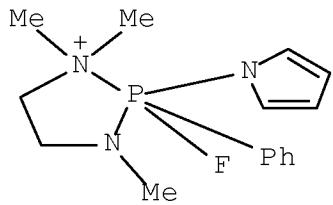
RN 132750-95-9 HCPLUS

CN 1,3,2-Diazaphospholidinium, 2-fluoro-2,2-dihydro-1,1,3-trimethyl-2-phenyl-2-(1H-pyrrol-1-yl)-, stereoisomer, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 132750-94-8

CMF C15 H22 F N3 P

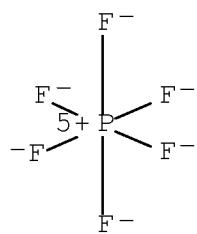


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT	19415-88-4P	132750-81-3P	132750-82-4P	132750-83-5P
	132750-84-6P	132750-85-7P	132750-86-8P	132750-87-9P
	132750-89-1P	132750-91-5P	<b>132750-93-7P</b>	
	<b>132750-95-9P</b>	132750-96-0P		

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L11 ANSWER 22 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1988:186471 HCAPLUS Full-text

DN 108:186471

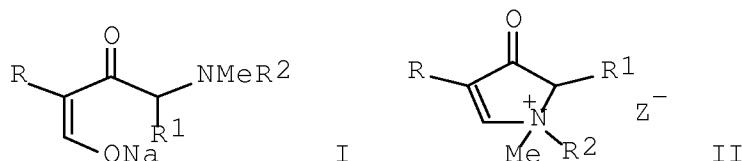
OREF 108:30627a,30630a

TI Synthesis and properties of cyclic keto alkenylammonium salts

AU Jung, Michael E.; Love, Brian E.

CS Dep. Chem. Biochem., Univ. California, Los Angeles, CA, 90024, USA

SO Journal of the Chemical Society, Chemical Communications (1987),  
 (17), 1288-90  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DT Journal  
 LA English  
 OS CASREACT 108:186471  
 GI

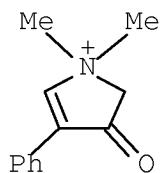


AB Condensation of  $\text{RCH}_2\text{COCHR}1\text{NMeR}2$  ( $\text{R} = \text{H, Me, Et, Ph; R1} = \text{H, Me, Ph}$ ,  $\text{R2} = \text{Me, Ph, CH}_2\text{Ph}$ ) with  $\text{HCO}_2\text{Et}$  in  $\text{PhMe-NaH}$  gave 33-100% sodium enolates I, which were cyclized by treatment with  $4-\text{MeC}_6\text{H}_4\text{SO}_2\text{Cl}$  in  $\text{MeCN}$  to give alkenylammonium salts II ( $\text{R} = \text{H, Me, Et, Ph; R1} = \text{H, Me, Ph; R2} = \text{Me; Z} = 4-\text{MeC}_6\text{H}_4\text{SO}_3$ ) in 41-88% yields. II [ $\text{R} = \text{Ph, R1} = \text{H, R2} = \text{Me; R-R2} = \text{Me; Z} = \text{MeSO}_3, (\text{EtO})_2\text{PO}_2, \text{BF}_4, \text{ClO}_4$ ] were prepared similarly.

IT 114050-22-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 114050-22-5 HCAPLUS  
 CN 3H-Pyrrolium, 1,2-dihydro-1,1-dimethyl-3-oxo-4-phenyl-,  
 tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 114050-19-0  
 CMF C12 H14 N O

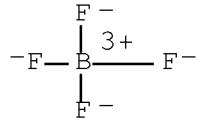


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 27-10 (Heterocyclic Compounds (One Hetero Atom))

IT 114050-10-1P 114050-12-3P 114050-14-5P 114050-16-7P

114050-18-9P 114050-20-3P 114050-21-4P 114050-22-5P

114050-23-6P 114050-24-7P 114050-25-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5  
CITINGS)

L11 ANSWER 23 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 1987:468042 HCAPLUS Full-text

DN 107:68042

OREF 107:11081a,11084a

TI Charge-donating materials for electrostatic image development

IN Tanaka, Katsuhiko; Fukumoto, Hiroshi

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

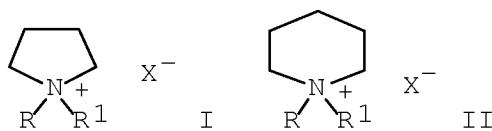
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61258269	A	19861115	JP 1985-100929	198505 13
PRAI	JP 1985-100929		19850513		
GI					



AB The title materials contain a compound of the formula I or II (R, R<sup>1</sup> = H, alkyl, aralkyl, aryl; X<sup>-</sup> = BF<sub>4</sub><sup>-</sup>, PF<sub>6</sub><sup>-</sup>) at least on their surfaces. The materials are useful for charging electrostatog. toners to provide adequate neg. charges. An Fe powder carrier was dispersed in a solution of II (R, R<sup>1</sup> = tert-Bu; X = BF<sub>4</sub><sup>-</sup>) (III) in MEK, dried, and the resulting coated carrier mixed with a toner prepared from D-125 (polystyrene) and Raven 3500 (C black) to give an electrostatog. developer, which had a triboelec. charge of -11  $\mu$ C/g as compared with -2  $\mu$ c/g for a control using a carrier containing no III. The developer gave high-quality images with good line reproduction and gradation and without fog and showed improved durability as compared with the control.

IT 109662-69-3

RL: USES (Uses)

(neg. charge-providing agent, for electrostatog. developers)

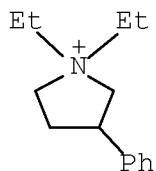
RN 109662-69-3 HCPLUS

CN Pyrrolidinium, 1,1-diethyl-3-phenyl-, hexafluorophosphate(1-) (1:1)  
(CA INDEX NAME)

CM 1

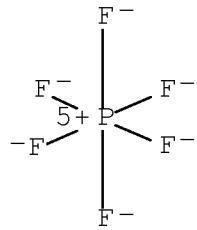
CRN 109662-68-2

CMF C14 H22 N



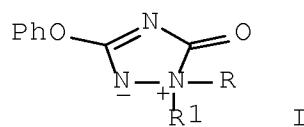
CM 2

CRN 16919-18-9  
 CMF F6 P  
 CCI CCS



IC ICM G03G009-10  
 ICS G03G015-08  
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 107751-93-9 107751-95-1 107751-96-2 107751-98-4 109662-64-8  
 109662-65-9 109662-67-1 109662-69-3  
 RL: USES (Uses)  
 (neg. charge-providing agent, for electrostatog. developers)  
 OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L11 ANSWER 24 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1984:423397 HCAPLUS Full-text  
 DN 101:23397  
 OREF 101:3709a,3712a  
 TI Synthesis and characterization of  
 anhydro-1,1-dialkyl-5-hydroxy-3-phenoxy-1,2,4-triazolium hydroxides  
 AU Potts, Kevin T.; Kuehnling, William R.; Murphy, Peter  
 CS Dep. Chem., Rensselaer Polytech. Inst., Troy, NY, 12181, USA  
 SO Journal of Organic Chemistry (1984), 49(13), 2404-7  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DT Journal  
 LA English  
 OS CASREACT 101:23397  
 GI



AB 1,1-Dialkylhydrazines and PhOCCl:NCOCl react to give excellent yields of anhydro-1,1-dialkyl-5-oxo-3-phenoxy-1,2,4-triazolium hydroxides I (R = R1 = Me, Et, PhCH<sub>2</sub>; R = Me, R1 = Et). The reaction is regiospecific, and the same products are obtained from PhOC(:NH)NHNRR1 and phosgene. Thiophosgene and isocyanide dichlorides give exocyclic sulfur and nitrogen containing zwitterions, resp. Alkylation of the triazolium hydroxides occurs exclusively on N-2, and an O-Ph to N-Ph migration was observed at .apprx.205°. Via dynamic NMR expts., the diasteriotopic methylene hydrogens of the benzyl groups attached to the quaternary nitrogen atom gave thermodn. exchange data of Ea = 21.7 ± 0.7 kcal mol<sup>-1</sup>, ΔH.thermod. = 21.0 ± 0.4 kcal mol<sup>-1</sup>, ΔS.thermod. = 6 ± 1 eu, and ΔG.thermod. = 19.3 ± kcal mol<sup>-1</sup>.

IT 90195-80-5<sup>P</sup>

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

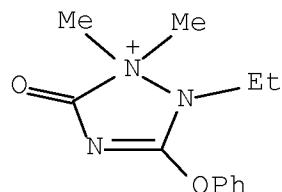
RN 90195-80-5 HCAPLUS

CN 3H-1,2,4-Triazolium, 1-ethyl-1,2-dihydro-2,2-dimethyl-3-oxo-5-phenoxy-, hexafluorophosphate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 90195-79-2

CMF C12 H16 N3 O2

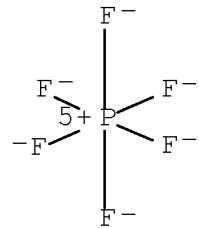


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 22

IT 90195-80-5P 90195-81-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2  
CITINGS)

L11 ANSWER 25 OF 30 HCPLUS COPYRIGHT 2009 ACS on STN

AN 1983:522390 HCPLUS Full-text

DN 99:122390

OREF 99:18853a,18856a

TI Alkylation of the sulfur- and nitrogen-containing compounds  
analogous to thiazoline systems

AU Ohara, Yoshio; Akiba, Kinya; Inamoto, Naoki

CS Fac. Sci., Univ. Tokyo, Tokyo, 113, Japan

SO Bulletin of the Chemical Society of Japan (1983), 56(5), 1508-13  
CODEN: BCSJA8; ISSN: 0009-2673

DT Journal

LA English

OS CASREACT 99:122390

AB RSCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub> (R = alkyl) and 3-methylthiazolidines underwent N-methylation both with Me<sub>3</sub>O<sup>+</sup>BF<sub>4</sub><sup>-</sup> and with MeI. With 2-MeSC<sub>6</sub>H<sub>4</sub>NMe<sub>2</sub> the main reaction was S-methylation. On the other hand, in 2-EtSC<sub>6</sub>H<sub>4</sub>NMe<sub>2</sub>, S-methylated product was major with MeI, while N-methylated product was major with Me<sub>3</sub>O<sup>+</sup>BF<sub>4</sub><sup>-</sup>. In the N-Et or N-benzyl derivative, only S-methylation occurred with both reagents. 3-Methyl-2,2-diphenyl-2,3-dihydrobenzothiazole gave S-methylated product with Me<sub>3</sub>O<sup>+</sup>BF<sub>4</sub><sup>-</sup>, suggesting that S-methylation becomes major when the 2-substituent is bulkier.

4-Methyl-3,4-dihydro-2H-benzo[b][1,4]thiazine was N-methylated with Me3O+BF4- while it gave S-methylated product with MeI. Phenothiazines and 1-dialkylamino-8-(methylthio)naphthalenes gave only S-methylated products. The possibility of intramolecular interaction between sulfonylo and amino groups has been discussed based on NMR data.

IT 74484-28-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

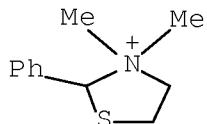
RN 74484-28-9 HCAPLUS

CN Thiazolidinium, 3,3-dimethyl-2-phenyl-, tetrafluoroborate(1-) (1:1)  
(CA INDEX NAME)

CM 1

CRN 74484-27-8

CMF C11 H16 N S

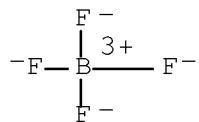


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 28-14 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 25

IT 2525-18-0P 29898-80-4P 66623-87-8P 74484-24-5P 74484-26-7P

74484-28-9P 74484-30-3P 74484-32-5P 74484-36-9P

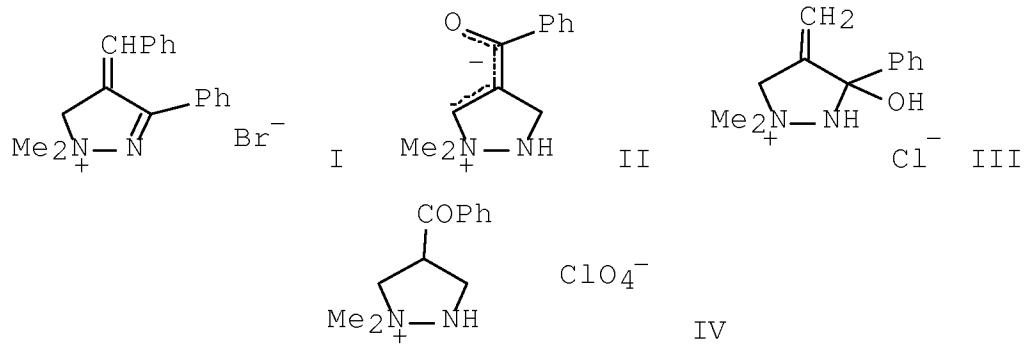
74484-39-2P 74484-41-6P 87094-23-3P 87094-25-5P 87094-26-6P

87094-27-7P	87094-29-9P	87094-31-3P	87094-32-4P	87094-33-5P
87094-35-7P	87094-36-8P	87094-38-0P	87094-39-1P	87094-40-4P
87094-42-6P	87094-43-7P	87094-45-9P	87094-47-1P	87094-49-3P
87094-51-7P	87094-52-8P	87094-53-9P	87094-55-1P	87094-56-2P
87094-58-4P	87094-60-8P	87094-62-0P	87094-66-4P	87111-91-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

OSC.G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L11 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1982:216965 HCAPLUS Full-text  
 DN 96:216965  
 OREF 96:35833a,35836a  
 TI Two-step sigmatropic rearrangement versus aldol addition of ammonium imides  
 AU Gompper, Rudolf; Kohl, Bernhard  
 CS Inst. Org. Chem., Univ. Munich, Munich, D-8000/2, Fed. Rep. Ger.  
 SO Angewandte Chemie (1982), 94(3), 203-4  
 CODEN: ANCEAD; ISSN: 0044-8249  
 DT Journal  
 LA German  
 GI



AB H<sub>2</sub>NN+Me<sub>2</sub>CH<sub>2</sub>C(COPh):CHPh Br-, prepared from BrCH<sub>2</sub>C(COPh):CHPh and H<sub>2</sub>NNMe<sub>2</sub>, did not undergo a [2,3]-sigmatropic rearrangement, but rather formed I by intramolecular aldol addition. The intermediacy of the dipolar intermediate II in the [2,3]-sigmatropic rearrangement of HNN+Me<sub>2</sub>CH<sub>2</sub>C(:CH<sub>2</sub>)COPh was demonstrated by the course of the reaction of PhCOC(CH<sub>2</sub>Cl):CH<sub>2</sub> with Me<sub>2</sub>NNH<sub>2</sub>. Pyrazolidinium salt III was formed in Me<sub>2</sub>CO, but in Et<sub>2</sub>O salt IV was formed. Adding EtN(CHMe<sub>2</sub>)<sub>2</sub> to the

ether gave 2:3 Me<sub>2</sub>NNHCH<sub>2</sub>C(:CH<sub>2</sub>)COPh(V)-IV. II was a common intermediate for IV and V; it was not completely certain that II was an intermediate for V.

IT 81917-60-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

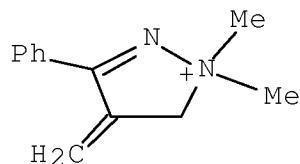
RN 81917-60-4 HCPLUS

CN 1H-Pyrazolium, 4,5-dihydro-1,1-dimethyl-4-methylene-3-phenyl-,  
tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

CM 1

CRN 81917-59-1

CMF C12 H15 N2

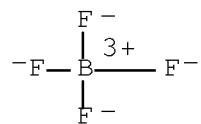


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



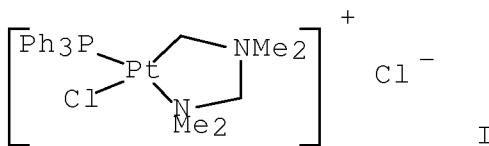
CC 22-5 (Physical Organic Chemistry)

Section cross-reference(s): 28

IT 81917-57-9P 81917-60-4P 81917-62-6P 81917-63-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

L11 ANSWER 27 OF 30 HCPLUS COPYRIGHT 2009 ACS on STN  
 AN 1982:35497 HCPLUS [Full-text](#)  
 DN 96:35497  
 OREF 96:5881a,5884a  
 TI Organometallic chemistry of carbon-nitrogen multiple bonds. 3.  
 Reaction of tris(triphenylphosphine)platinum(0) with  
 dimethylmethyleniminium chloride. X-ray structures of the products  
 $[(\text{Ph}_3\text{P})\text{PtCH}_2\text{N}(\text{CH}_3)_2\text{CH}_2\text{N}(\text{CH}_3)_2\text{Cl}]^{\text{Cl}}$  and  
 $\text{cis}-[(\text{Ph}_3\text{P})\text{Pt}[\text{CHN}(\text{CH}_3)_2]\text{Cl}_2]$   
 AU Barefield, E. K.; Carrier, A. M.; Sepelak, D. J.; Van Derveer, D. G.  
 CS Sch. Chem., Georgia Inst. Technol., Atlanta, GA, 30332, USA  
 SO Organometallics (1982), 1(1), 103-10  
 CODEN: ORGND7; ISSN: 0276-7333  
 DT Journal  
 LA English  
 GI

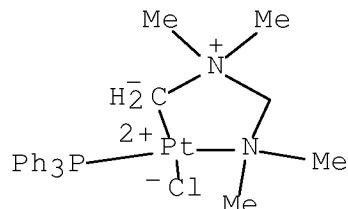


AB Pt complex I was prepared in 78% yield by treating  $[\text{Me}_2\text{N}:\text{CH}_2]\text{Cl}$  with  $(\text{Ph}_3\text{P})_3\text{Pt}$  in THF. Heating I in MeCN gave carbene  $\text{cis}-(\text{Ph}_3\text{P})\text{Pt}(:\text{CHNMe}_2)\text{Cl}_2$  (II). The crystal structures of I and II were determined. I has Pt-L distances of P, 2.223 (2); Cl, 2.362 (2); N, 2134 (4) and C, 2.017 (5) Å. The Pt-C distance is the shortest presently known for an sp<sup>3</sup> C (without F substituents) bonded trans to Cl. II has Pt-L distances of P, 2.220 (2), Cl(1), 2.347 (3), Cl (2), 2.345 (3) and C, 1.96 (1) Å. The dihedral angle between the carbene and coordination planes is 84°.

IT 79328-84-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

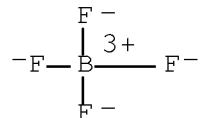
RN 79328-84-0 HCPLUS  
 CN Platinum(1+), chloro[1-(dimethylamino)-N,N-dimethylmethanaminium  
 methylide](triphenylphosphine)-, (SP-4-4)-, tetrafluoroborate(1-)  
 (9CI) (CA INDEX NAME)

CRN 79328-83-9  
 CMF C24 H31 Cl N2 P Pt  
 CCI CCS



CM 2

CRN 14874-70-5  
 CMF B F4  
 CCI CCS

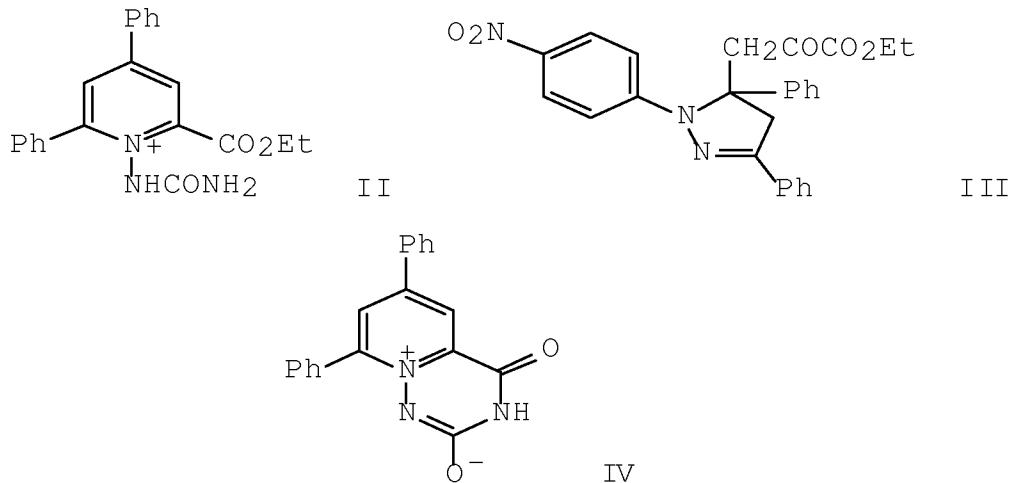


CC 29-13 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 75  
 IT 79328-84-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 OSC.G 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS RECORD (20  
 CITINGS)

L11 ANSWER 28 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1981:515213 HCAPLUS Full-text  
 DN 95:115213  
 OREF 95:19325a,19328a  
 TI Reactions of pyryliums with mono- and asym-disubstituted hydrazines  
 AU Katritzky, Alan Roy; Ballesteros, Paloma; Tomas, Alberto Tarraga  
 CS Sch. Chem. Sci., Univ. East Anglia, Norwich, NR4 7TJ, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and

Bio-Organic Chemistry (1972-1999) (1981), (5), 1495-500  
CODEN: JCPRB4; ISSN: 0300-922X

DT Journal  
LA English  
OS CASREACT 95:115213  
GI



AB The reactions of pyrylium salts with a variety of mono- and disubstituted hydrazines were studied. The products were generally either the appropriate pyridinium salt or the ring cleavage products; in 2 cases 2-pyrazoline derivs. were obtained. E.g., 2-ethoxycarbonyl-4,6-diphenylpyrylium tetrafluoroborate (I) with PhNHNH<sub>2</sub> (MeOH, 20°, 30 min) gave 73% PhNHN:CPhCH<sub>2</sub>CPh:CHCOCO<sub>2</sub>Et, with H<sub>2</sub>NCONHNH<sub>2</sub>.HCl (aqueous EtOH, NaOH, reflux, 3 h) I gave the pyridinium salt II (56%), and with p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NHNH<sub>2</sub> (EtOH, 20°, 2 h) the product was III (59%). As was observed for several compds. derived from I, II readily cyclized [(MeOCH<sub>2</sub>)<sub>2</sub>, K<sub>2</sub>CO<sub>3</sub>, 20°, 2 h] to give 83% IV.

IT 78904-69-5P

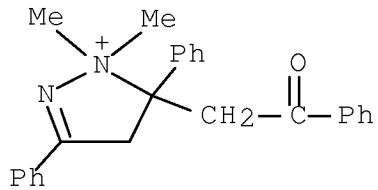
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 78904-69-5 HCAPLUS

CN 1H-Pyrazolium, 4,5-dihydro-1,1-dimethyl-5-(2-oxo-2-phenylethyl)-3,5-diphenyl-, tetrafluoroborate(1-) (1:1) (CA INDEX NAME)

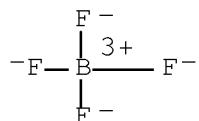
CM 1

CRN 78904-68-4  
 CMF C25 H25 N2 O



CM 2

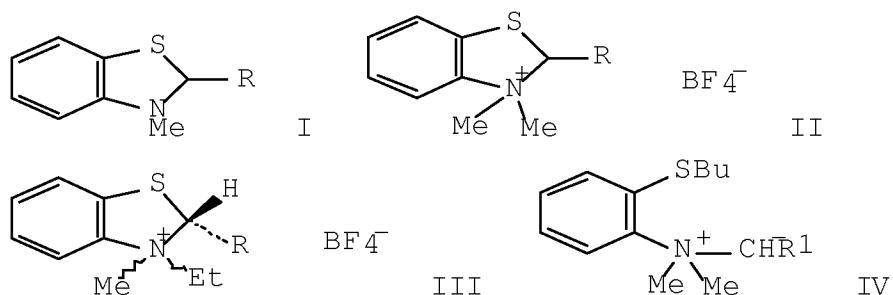
CRN 14874-70-5  
 CMF B F4  
 CCI CCS



CC 27-17 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 23, 25, 28  
 IT 78904-65-1P 78904-66-2P 78904-67-3P 78904-69-5P  
 78904-70-8P 78904-71-9P 78904-73-1P 78904-75-3P 78904-76-4P  
 78904-77-5P 78904-78-6P 78904-79-7P 78904-80-0P 78904-81-1P  
 78904-82-2P 78904-84-4P 78904-90-2P 78904-92-4P 78904-97-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7  
 CITINGS)

L11 ANSWER 29 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1980:495173 HCAPLUS Full-text  
 DN 93:95173  
 OREF 93:15257a,15260a  
 TI Alkylation of benzothiazolines and their Stevens rearrangement  
 AU Ohara, Yoshio; Akiba, Kinya; Inamoto, Naoki

CS Fac. Sci., Univ. Tokyo, Tokyo, 113, Japan  
 SO Fukusokan Kagaku Toronkai Koen Yoshishu, 12th (1979), 236-40  
 Publisher: Kitasato Daigaku Yakugakubu, Tokyo, Japan.  
 CODEN: 42VCA9  
 DT Conference  
 LA Japanese  
 GI



AB Benzothiazolines I ( $R = 4\text{-MeOC}_6\text{H}_4, 4\text{-MeC}_6\text{H}_4, \text{Ph}, 4\text{-ClC}_6\text{H}_4, \text{Me}, \text{H}$ ) were methylated by Meerwein reagents to give benzothiazolinium salts II. Treating I with  $\text{Et}_3\text{O}^+\text{BF}_4^-$  gave isomeric III. The selectivity of  $\text{R}_3\text{O}^+\text{BF}_4^-$ ,  $\text{MeI}$ , and  $\text{MeI}\text{-AgClO}_4$  in N- and/or S-alkylation of related compds. were examined. Thus, when an N atom is in resonance with 2 benzene rings, i.e., phenothiazine, alkylation occurs on S even with  $\text{R}_3\text{O}^+\text{BF}_4^-$ . Alkylation of N and S competes when the N is connected to one  $\text{C}_6\text{H}_6$  ring. Treating II with  $(\text{Me}_2\text{CH})_2\text{NLi}$  and  $\text{BuLi}$  caused a Stevens rearrangement. Removal of a proton at C-2 by  $(\text{Me}_2\text{CH})_2\text{NLi}$  gave  $\pi$ -type cyclic ammonium ylide as intermediates, which gave rearrangement products in moderate yield. Direct attack at the ring S by  $\text{BuLi}$  gave ammonium ylide IV, which gave mainly an unusual Stevens rearrangement to  $2\text{-(BuS)C}_6\text{H}_4\text{CHRNMe}_2$  by participation of the ortho-BuS group.

IT 74484-28-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

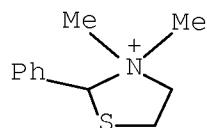
RN 74484-28-9 HCPLUS

CN Thiazolidinium, 3,3-dimethyl-2-phenyl-, tetrafluoroborate(1-) (1:1)  
 (CA INDEX NAME)

CM 1

CRN 74484-27-8

CMF C11 H16 N S

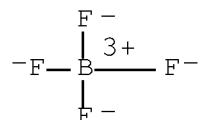


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))  
 IT 92-59-1P 614-30-2P 62290-08-8P 62290-10-2P 68549-59-7P  
     70265-71-3P 70265-72-4P 70265-73-5P 70459-24-4P 74484-13-2P  
     74484-15-4P 74484-23-4P 74484-24-5P 74484-25-6P 74484-26-7P  
     74484-28-9P 74484-30-3P 74484-32-5P 74484-34-7P  
     74484-36-9P 74484-39-2P 74484-41-6P 74484-42-7P 74484-43-8P  
     74484-44-9P 74484-47-2P 74484-48-3P 74484-49-4P 74484-50-7P  
     74484-51-8P 74484-52-9P 74484-54-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
       (preparation of)

L11 ANSWER 30 OF 30 HCPLUS COPYRIGHT 2009 ACS on STN

AN 1972:24570 HCPLUS Full-text

DN 76:24570

OREF 76:3995a,3998a

TI Small charged rings. XV. Kinetics and stereochemistry of the ring expansion reaction of 2-arylaziridinium salts with benzaldehyde

AU Keenan, Thomas R.; Leonard, Nelson J.

CS Sch. Chem. Sci., Univ. Illinois, Urbana, IL, USA

SO Journal of the American Chemical Society (1971), 93(24), 6567-74

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

OS CASREACT 76:24570

AB Preparation and isolation of 2-aryl-substituted aziridinium (ethyleniminium) salts are described for the first time.

Ethyleniminium ions of this type were previously implicated as intermediates in adrenaline blockade. Using a series of 2-aryl-1,1-dimethylaziridinium fluoroborates with BzH, the stereochemistry of the ring expansion reaction of aziridinium salts with aldehydes, was determined. This representative of a family of aziridinium ring expansion reactions was highly stereoselective, since only his-5-aryl-3,3-dimethyl-2-phenyloxazolidinium fluoroborates were produced. The kinetics of the reaction, determined by following the NMR spectra, showed the reaction to be first order in aziridinium salt, zero order in BzH, and dependent on the substituents on the aryl ring. A Hammett correlation with  $\sigma^+$ ,  $\rho^+ = -1.25$  was observed. The stereochem. and kinetic findings preclude several mechanisms including concerted cycloaddn. and favor the intermediacy of aminocarbonium ions.

IT 34880-00-7P 34880-01-8P 34880-02-9P

34880-03-0P 34955-84-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 34880-00-7 HCPLUS

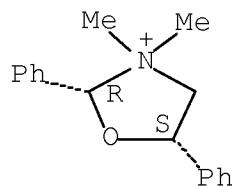
CN Oxazolidinium, 3,3-dimethyl-2,5-diphenyl-, cis-,  
tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 46984-17-2

CMF C17 H20 N O

Relative stereochemistry.

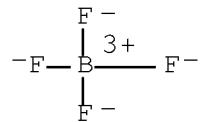


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 34880-01-8 HCAPLUS

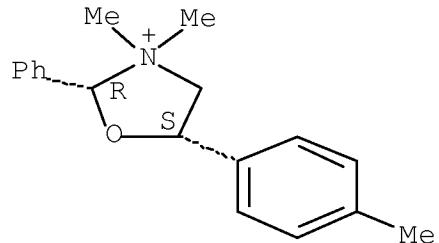
CN Oxazolidinium, 3,3-dimethyl-5-(4-methylphenyl)-2-phenyl-, cis-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 47068-18-8

CMF C18 H22 N O

Relative stereochemistry.

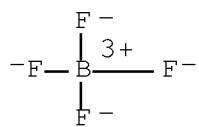


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 34880-02-9 HCPLUS

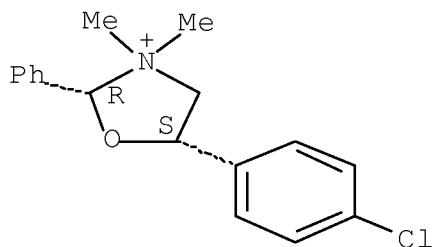
CN Oxazolidinium, 5-(4-chlorophenyl)-3,3-dimethyl-2-phenyl-, cis-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 47068-19-9

CMF C17 H19 Cl N O

Relative stereochemistry.

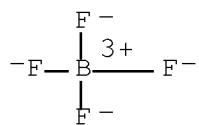


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 34880-03-0 HCPLUS

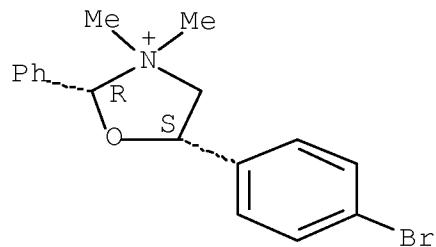
CN Oxazolidinium, 5-(4-bromophenyl)-3,3-dimethyl-2-phenyl-, cis-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 47068-17-7

CMF C17 H19 Br N O

Relative stereochemistry.

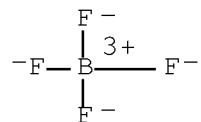


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



RN 34955-84-5 HCAPLUS

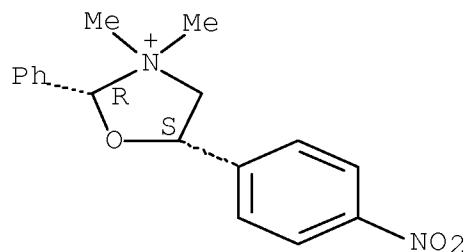
CN Oxazolidinium, 3,3-dimethyl-5-(4-nitrophenyl)-2-phenyl-, cis-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 47221-20-5

CMF C17 H19 N2 O3

Relative stereochemistry.

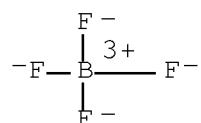


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



CC 22 (Physical Organic Chemistry)

IT 16970-97-1P 34879-94-2P 34879-95-3P 34879-96-4P 34879-97-5P

34879-98-6P 34879-99-7P 34880-00-7P

34880-01-8P 34880-02-9P 34880-03-0P

34955-84-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)OSC.G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6  
CITINGS)

&gt;=